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THE SIGNIFICANCE OF PAIN IN THE DIAGNOSIS OF CANCER

By Matthew D. Mann, A. M., M. D.
Professor of Obstetrics and Gynæcology in the University of Buffalo.

It is very curious how strongly the impression has taken hold of the popular mind that pain, severe in character, is a necessary accompaniment of cancer. Nor is the idea confined to the laity alone. A little inquiry will develop the fact that the profession is nearly equally imbued with this notion, notwithstanding that the text-books almost universally, and some of them strongly, insist on a contrary teaching. The fact that pain does not necessarily accompany cancer was first brought to my notice a number of years ago by a case of carcinoma of the fundus uteri, internal, which went on to a fatal termination without a moment's discomfort from pain, tenderness, or any other symptom but hemorrhage and gradually increasing exhaustion. The course of the disease extended over eighteen months.

During the last year this fact in the clinical course of cancerous disease has been forced upon me by an unusual number of cases, some of which I will relate.

One case, which I saw with Dr. Rochester in consultation, had had one breast removed before I saw her. At the time of my visit the other breast was the seat of a hard, somewhat tender mass, with retracted nipple. There was absolutely no pain. This breast was

also removed, but the disease quickly showed itself in the pelvis, when it produced a large mass with considerable ascites. When last I saw her, there was no pain, but considerable emaciation, and the end not far off.

Another case, seen with Dr. Harrington. Mrs. M., 51 years old; had never been pregnant; two months before she had a severe hemorrhage; previously in good health; no pain nor suffering of any kind; the cervix was the seat of a moderate sized tumor, evidently malignant; the cervix was amputated with the scissors, and the surface cauterized. She made a good recovery and is still, a year after the operation, in good health.

CASE III.—Mrs. A.; had a large tumor in the left breast; no pain, tenderness,nor loss of general health. Breast removed by Dr. R. Park, who found it to be a cancer.

CASE IV.—Mrs. B.; had been under a homeopathic physician for a long time for the treatment of "a polypus of the womb." An examination revealed a large tumor completely filling the vagina, bleeding on touch and surrounded by a foul-smelling discharge. I at first thought it might be a mucous polypus in a state of partial disintegration; but, on attempting to remove it, I found it to be malignant and attached to the posterior lip of the uterus, and involving the posterior vaginal wall to a considerable extent. The base was cut out and cauterized as deeply as possible with chloride of zinc, but it came back in a few months. I have since lost sight of the patient.

In this case there was absolutely no pain at all, either before or after the operation. A little inconvenience from the size and distension, but that was all. The improvement in general health after the operation was most marked.

CASE V.—Not long since, Dr. Diehl sent to me for examination a young married woman, the mother of seven children. She was a picture of health. She said her menstruation of late had been very profuse and long, and Dr. Diehl had examined her and told her she had a serious disease. She was inclined to make light of it, for she said: "I feel perfectly well, and have never had a bit of pain in my life except in labor." I found a large excavation taking the place of the cervix uteri; malignant disease in a far advanced condition.

She entered my service in the General Hospital. I curetted the cavity and cauterized with zinc chloride. She left the hospital with a granulating surface instead of a sloughing one, but evidently her days were numbered.

At the same time in the ward were three cases, two of cancer of the cervix, and one of cancer of the fundus uteri; one of them was far gone, and died in the hospital. In each of them there was a similar history. In none of them was it necessary to give any anodyne.

The next case is one still under observation, in which Dr. T. G. Thomas removed a large ovarian tumor some time ago; one of the most difficult operations, he writes, that he ever performed. She came under my care last spring. At that time she stated that the sinus left by an abdominal drainage tube had never closed, but had discharged continually. Lately there had been a considerable hemorrhage from it, and a good deal of "proud flesh" had formed around it. I found several sinuses leading down into a large cavity bleeding on the lightest touch; a large mass in the abdomen, the size of two fists, and the pelvic cavity, as shown by a vaginal examination, filled with a hard, nodular, firmly adherent mass. Around the sinus there were granulations as large as a silver dollar. A small portion removed and examined under the microscope showed me that it was encephaloid.

She is now gradually failing, and has but a few weeks or, at best, months to live; but at no time has she suffered any pain. There is some soreness on the skin from the irritating discharge, and a good deal of restlessness, but nothing more beside the steadily progressive emaciation and exhaustion.

The last case is almost a repetition of the others. A lady 60 years old; mother of two children; perfectly well up to a year before coming to me. Then she began to flow, and lost considerable blood. An examination showed the cervix and vagina involved in a papillomatous growth, evidently malignant. She was greatly frightened, but tried to reassure herself by the fact that she had "no pain, and therefore it could not be a cancer or anything serious." The case is likely to be a long one.

These cases have all come under observation within a few months, and might be supplemented by others from earlier pages in my note-

book. They, of course, do not include all the cases of cancer seen during the time. Some have been painful, but these have been rather the exception than the rule. They are enough to make clear my point. Pain is not the universal symptom of cancer, even in its last stages; nor is it even common in the earlier stages. Here are cases of cancer of the breast, pelvis, fundus and cervix uteri, including the vagina, in which pain, as a symptom, was entirely wanting.

What is the lesson which these cases teach? Only what has been often insisted upon before, but which must again be brought to the notice of the profession, that women, especially mothers in the middle age, with only slight symptoms of pelvic disorder, should not be neglected; and, above all, that a bloody or watery discharge in a woman who has passed the meno-pause is always a suspicious thing and demands immediate attention and an examination, even though no pain exist.

Our chances for doing good are in the vast majority of cases thrown away in delays and procrastinating expectant treatment; so that when at last the urgency of the case compels an examination, it is too late.

Flow, in a woman past the meno-pause, does not necessarily mean cancer, but the chances of its being such are sufficiently great to make an immediate examination imperative.

In one of the cases reported, it will be noticed that the patient had a cancer of the cervix, and had never been pregnant. This is the only case of the kind which ever came to my notice. From considerable observation I have come to agree with Dr. Emmet, and to consider laceration of the cervix as bearing a strong œtiological relation to cancer of that organ; and while there may be a few rare exceptions, the rule still holds good.

Buffalo, Sept. 9, 1885.

MR. BEST has suggested an ingenious and simple way of testing for albumen at the bedside. He dips the nozzle of a glass syringe into the receptacle containing urine, draws up a little, and then, inserting it into a bottle of nitric acid, also draws up a drop or two of the acid. The hazy line at the junction of the two fluids indicates the presence of albumen.—*Br. Med. Jour.*

AN IMPROVED SPHYGMOGRAPH AND ITS WORK.

By H. R. Hopkins, M. D.
Physician to the Buffalo General Hospital.

In the year 1879 the writer became interested in the practical study of the Sphygmograph. At the meeting of the American Medical Association in New York, in 1880, he made a communication to that society, entitled: "Sphygmograms, with Notes of Autopsies," containing characteristic traces of eight cases, with the results of section in four instances.

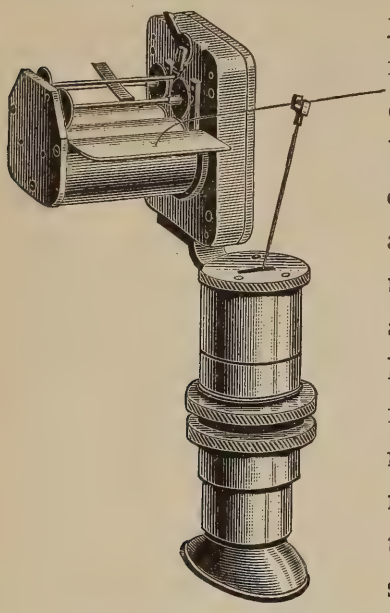
Of the eight sphygmograms then published, one, thought to be the one most perfectly taken, was by an instrument designed and made by Mr. A. M. Edwards of Buffalo. This instrument has been in constant use from that time, and this communication is for the purpose of introducing it and its work to the general profession.

Upon recalling the statement made to the profession, in 1880, that the verdict of many of those who had tried to use the Sphygmograph was to the effect that the instrument was a grievous disappointment, a sorry failure, the writer finds that he but fairly stated the case. Not only was this criticism appropriate then, but remarks much to the same effect would be equally applicable at this time. The writer also knows no reason for changing the view then expressed, that the cause for this failure was not in the subject studied, but in the instruments used; that before the Sphygmograph could win the confidence of the profession, it must do the work to merit such confidence, and that before this work or anything approaching a work of this importance can be accomplished, "the instrument must be made infinitely more precise, more sensitive and more uniform in its peformance than at present."

The Edwards Sphygmograph is an effort in this direction. How successful this effort has been can only be shown by the work of the members of the profession into whose hands it shall come.

The accompanying cut gives a fair idea of the instrument. It is proper to add that its mechanism is of the highest order, its mag-

nifying device runs in jeweled bearings and conical pivots with end jewels; in every way it is free as possible from inertia, friction, and other sources of instrumental error. No effort has been directed to the production of a cheap instrument, but to make one capable of performing in the best possible manner. Five years of its use in private and hospital service, has given me a collection of many thousands of traces, representing many interesting conditions, normal and diseased. This study has naturally resulted in bringing my mind to certain conclusions and convictions, some of which it seems proper to bring to the attention of the profession at this time. For the purpose of illustrating this matter, I have had prepared copperplates showing a collection of sphygmograms from sixty-eight different individuals. These plates were made by Mr. Henry Chandler of Buffalo, by the photo-electrotype process, and are perfect fac-similes of the originals now in my possession. In each instance I am convinced that the trace is characteristic of the individual's circulation at the time at which it was taken, and that in case inferences or conclusions should be drawn from them, such conclusions will not be overthrown by future observations.



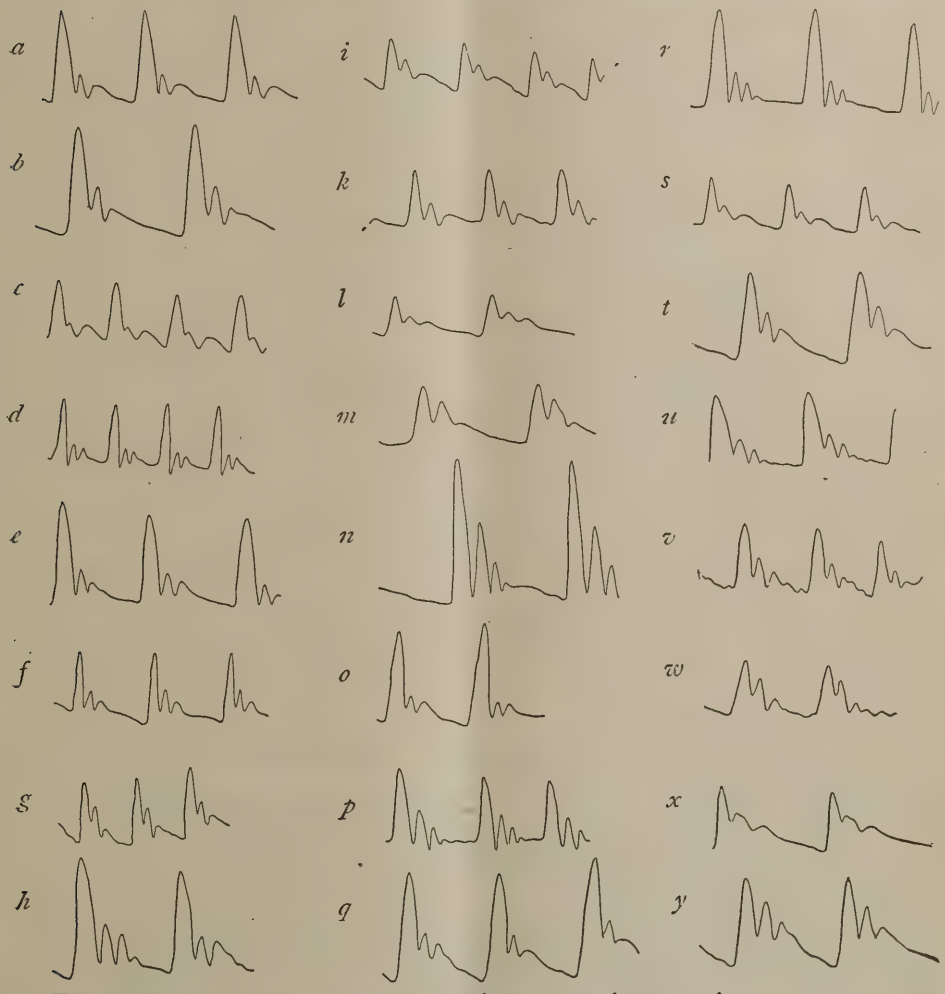
The propositions to which I wish to call attention at this time, the correctness of which my work seems to demonstrate and the accompanying figures to illustrate, may at first sight appear quite or altogether trivial; certainly they are quite fundamental. It should, however, be remarked, in passing, that this subject is of too much importance to have the work of any individual undertake to establish even the most insignificant factor in the case. Therefore, the work and the conclusions are submitted for the critical examination of the profession. Named in natural order and importance these conclusions are:

That each person has a characteristic sphygmogram.

That the individual characters of these traces, during stable conditions of health, persist for years.

That the traces of early youth and advanced age differ from those of adult life, by being less distinctly individual; and also differ from each other,—those of youth showing more distinct definition of the major elements or waves, those of age giving higher tension with less elasticity.

I—*VARIETIES OF NORMAL SPHYGMOGRAMS.*



That the states of low and high arterial tension cause constant modifications in the form of the trace, which are easily distinguishable.

As instances of the observations from which the foregoing conclusions are drawn, attention is directed to the accompanying sphygmograms. This collection, twenty-four in number, gives varieties of normal sphygmograms. It may at first seem to the reader that more space is given to the illustration of so simple

a proposition, the individuality of the adult sphygmogram, than is required. To the writer, this proposition is of the first importance, and if it can be maintained will go a long way towards the demonstration of two things: That there is a great work for the Sphygmograph, and that there is a Sphygmograph for the work.

The writer has frequently heard the statement from men who had given some little attention to the study of this instrument, that they could at will produce from the same pulse any kind of a trace which might be wanted, now of the highest tension and again hyperdicrotic. This probably exaggerates the distrust of the instrument; but the statement can surely be made that, with the exception of a few men, the profession hold the markings of the Sphygmograph as quite confusing, contradictory and unreliable.

In view of this well-recognized skepticism, the writer feels that the claim that each adult has a characteristic trace, which the proper instrument will uniformly show, is one of no mean ambition. His work uniformly supports this claim. Of the traces from different persons in his possession no two are identical; resemblances are frequently seen, but differences as well. This law was early recognized, that in proportion as the trace was well developed—well taken—would its individuality appear; and on the other hand just in proportion as traces were rudimentary—poorly taken—would they tend to resemble each other.

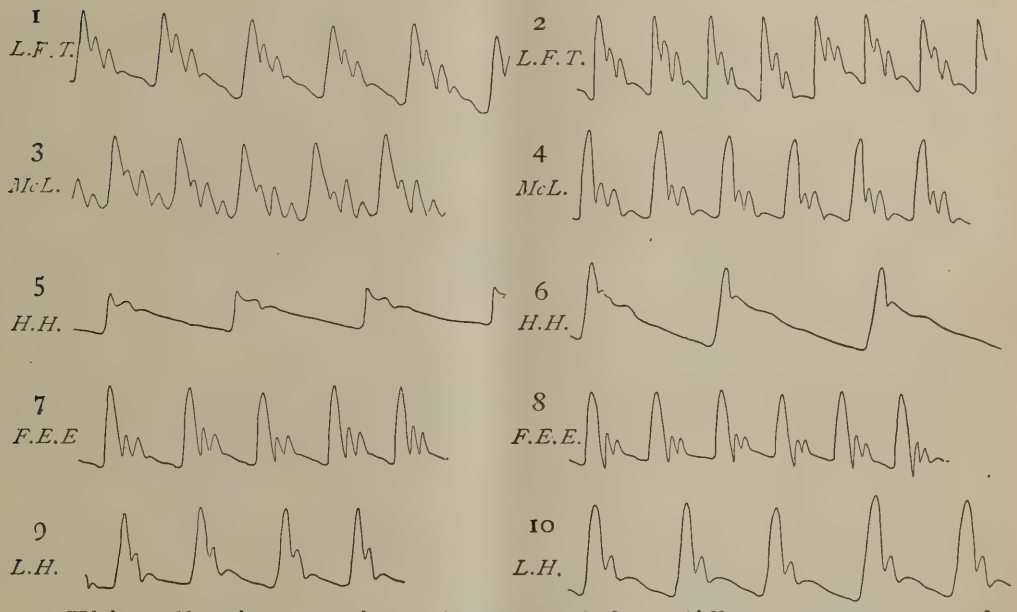
I would remark again in passing: That the aim of the observer should be to take only those traces which are characteristic of the pulse from which they are taken, and that when this is done the reporting of the pressure used is as irrelevant as would be the report of the microscopist upon the time it took him to get his glass in focus. The trace must speak for itself—the effort spent in getting it is quite another matter.

It also seemed well to show the traces of many individuals in the collection, for the reason that, from the occurrence in almost every publication upon this subject of the same diagram of the normal pulse trace, many have come to hold that the normal pulse trace must look just like the would-be models. My studies impress me that this model is quite too rigid; that in the nature of the pulse and in the art of its trace there exists much greater variety.

These twenty-four traces were taken at various times during the last five years, from adults believed by me to be free from disease of the circulatory system.

The proposition illustrated by Plate II., seems of importance chiefly as it gives support to the proposition first named. My experience has been that an individual's trace remains the same in general appearance and character, unless there is a manifest change in the bodily conditions.

II— *SPHYGMOGRAMS: Showing the persistence of individual characteristics.*

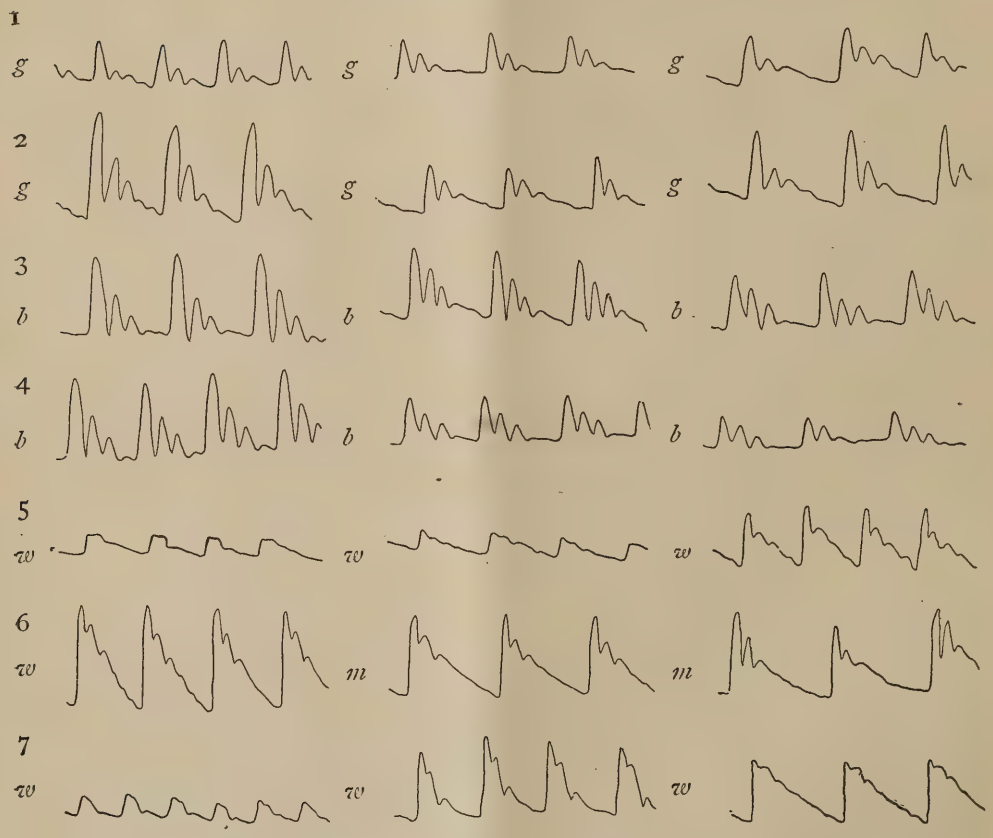


This collection consists of traces of five different persons, each trace taken at different times, in periods ranging from a few months to five years. Nos. 1 and 2 are from a woman of 50 years. At the time they were taken she was in fair health, but is now quite broken by what seems to be premature decay. They are of moderately-high tension. No. 1 was taken January 26, 1880; No. 2 was taken March 18, 1880. Nos. 3 and 4 were from a man of 53, suffering from cerebral syphilis. No. 3 is dated December 28, 1879, and No. 4, March 8, 1880. Nos. 5 and 6 were from a man of 40, in good health. No. 5 is dated November 11, 1879; No. 6, June 27, 1885. Nos. 7 and 8 were from a man of 35. No. 7 dated December 24, 1879; No. 8, January 25, 1880. Nos. 9 and 10 were from a woman of 37. No. 9 dated November 10, 1870; No. 10, March 21, 1885.

The writer cannot believe that the identity seen to persist in these traces for months and years, represents anything but a characteristic of the individual's pulse; and consequently that the testimony of this table is in the highest degree confirmatory of our first proposition, which, if established, carries the second with it.

The next proposition—the changes marked in the sphygmogram from youth to age—is well illustrated by Plate III. This con-

III.—*SPHYGMOGRAMS: Showing the forms peculiar to youth and age.*



sists of two sets of traces, boys and girls aged ten to twelve years, and men and women from seventy-seven to ninety years of age. The four upper lines, twelve traces, are from the children—*g* meaning girl, and *b* meaning boy. Of those of riper years, *w* stands for woman, and *m* for man. This collection has a most positively practical bearing in connection with that pregnant thought of Samuel Wilks, that "a man is no younger than his arteries." The writer thinks it particularly worth the study of members of our pro-

fession engaged in making examinations for life insurance. The traces upon the left of the lines 3 and 4 were taken from twin boys of ten years.

My fourth proposition asserts the most presumptuous claim which, in my judgment, it is expedient to make regarding the work of the Sphygmograph :

That there are wide variations in the degree of distending blood-pressure within the arteries of different people, or the arteries of the same person at different times. That these various degrees of blood-distending pressure—arterial tension—cause constant modifications in the form of the trace ; modifications which are easily distinguished one from the other.

I do not feel called upon to state the observations or experiments by which physiologists and clinicians have demonstrated the premises, step by step, upon which the conclusion of the fact of arterial tension and varying arterial tension rests, but would put it plainly that these states of blood-pressure are facts which have been demonstrated over and over again.

My desire is to report to the profession the fact, that, in an experience of five years, the Sphygmograph has never once hesitated to show signs characteristic of low or high tension, where from the touch or from the history of the case either of such conditions could reasonably be suspected of being present.

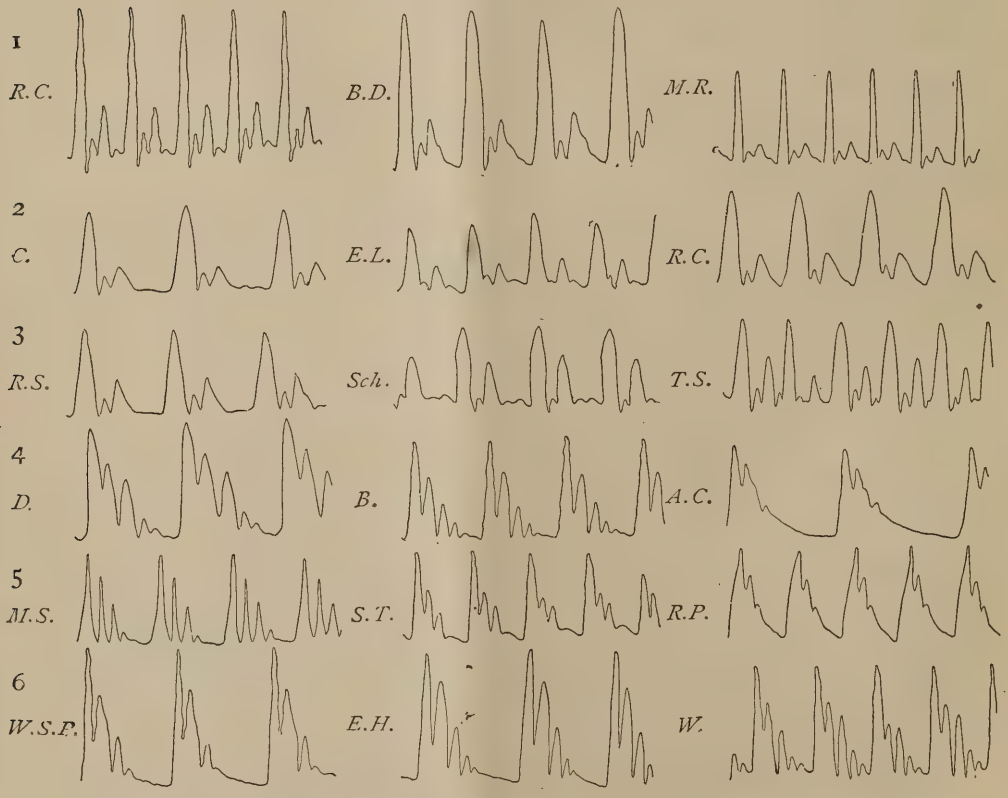
It is also worthy of note, in passing, that the study of these forms of traces adds zest to the study of the pulses and cases from which they are taken. One very soon learns to observe something more of the pulse than its rate per minute. What the eye so plainly sees, the finger soon learns to feel. Dicrotism, even in slight degrees, and high tension in any degree, can easily be diagnosed by the touch. The use of the Sphygmograph surely tends to revive the *tactus eruditus* of the fathers.

Plate IV. illustrates my experience with dicrotism and high tension. The dicrotous traces in the first three lines, nine in number, were from persons suffering from phthisis, typhoid fever, pernicious anœmia, or profuse hemorrhage. The high tension traces in the lower three lines, nine in number, were from persons suffering from hemiplegia, atheroma, Bright's disease, pre-albuminuric stage, or

hysteria. Of the dicrotous traces, beginning with the left of the first line, R. C. was a male, aged 33, in an advanced stage of phthisis; B. D., male, aged 20, was suffering from a simple continued fever of about ten days' duration.

M. R., female, aged 19, was ill for months with most severe pernicious anœmia, which at length brought her well nigh to death's door. Apparently her life was saved by an operation for direct transfusion from the human arm by Dr. Charles Cary at the Buffalo General Hospital, August 3, 1880, six days before this trace was taken. The sphygmographic history of this case would make abundant material for an article.

IV—*SPHYGMOGRAMS: Showing the modifications of forms of low and high arterial tension.*



In the second line, C., male, aged 25, was convalescent from typhoid fever. E. L., R. C. and R. S. were all young men in different stages of typhoid fever. Sch., in third line, was from a man of 43 years, taken about twenty-four hours after having a copious and exhausting pulmonary hemorrhage.

T. S. was from a young man in the Buffalo General Hospital, to all appearances safely convalescent from typhoid fever. This trace was taken early in March, 1880. This was early in my study of the Sphygmograph, and the great prominence of the dicrotism made quite an impression upon me. I continued to visit him and take his trace for several days—the dicrotism being more marked at each visit. Without any warning in his temperature, he sank and died in a few hours. In my last trace, taken the day before his death, the dicrotic wave in some cases is as high as the percussion wave.

My confidence in the future of the Sphygmograph has grown largely from seeing its uniform records of the relations of the waves of low tension pulses.

Of the high tension traces: D., male, age 50; had hemiplegia from arterial degeneration. B., female, age 58; had aortic disease, probably atheroma, and multiple gangrene of fingers and toes, of both hands and feet, probably from embolisms. A. C., male, age 54, had a nasty sallow color, great muscular weakness, loss of weight, copious and light urine, not albuminous, increased area of cardiac dullness, heaving impulse which, with a high tension trace, caused me to make a diagnosis of Bright's, pre-albuminuric stage. This trace was taken February 6, 1885, and the future of the case will be watched with great interest.

M. S., female, age 23; was plainly hysterical. The trace shows what I have found to be a common form of moderate high tension in elastic arteries. S. T., female, age 50; also hysterical. This trace was taken March 18, 1880. She now has slight hemiplegia with amnesia. R. P., female, age 53; was in fair health when the trace was taken, March 11, 1880, but died within a year from that time, of apoplexy. W. S. P., E. H. and W. were males, upwards of 50 years of age, suffering with hemiplegia from arterial disease.

This matter is submitted for the criticism of the profession, with the feeling that the illustrations represent the quality of the sphygmograms I have taken. These observatoins, from their quantity, their quality and their duration, are to my mind demonstrative evidence that there is a work for the Sphygmograph, and a Sphygmograph for the work.

The writer is well aware of the peculiar danger to this cause of hasty generalization. Observations must be repeated and re-repeated; experiments must be confirmed and many times confirmed. He only submits that, in view of the supreme importance of the facts involved—the phenomena of the circulation of the blood—light should be admitted from every reliable source.

433 Franklin St.

ENDEMIC DYSENTERY.

BY M. A. VEEDER, M. D.
Lyons, N. Y.

This disease has been attracting special attention recently, because of the cholera scare, and because of its prevalence in fever-stricken Plymouth. It is the purpose of the present paper to give an account of a localized epidemic that occurred at Lyons, N. Y., in the fall of 1882. The first cases occurred amongst the children in a family living upon the outskirts of the village. For some weeks they had been subject to ordinary diarrhœa and were treated homeopathically. At length the disease assumed a dysenteric form, thirty to fifty stools consisting of blood and foul-smelling mucus being passed daily. These discharges from the bowels were thrown into a water-closet, the odor from which soon became so pungent as to be perceptible for a long distance. Soon new cases began to occur, at first in families living but a few rods away, and then spreading from house to house along that street, and nowhere else in the village. In a very short time there were thirty-six cases, and new ones were appearing at the rate of three or four daily. The patients were of all ages from one year up to sixty, and about as many adults as children were affected.

Of thirty-six cases known to the writer, seven proved fatal, of which latter number three were adults, and four were children. The distribution of the cases around the crest of a hill was such as to make it impossible that the contagion should have been conveyed by means of the water supply. The hot days and cool nights

prevailing at the time were undoubtedly favorable to the development of dysentery, but such general atmospheric conditions alone would not account for a severe local epidemic. There must have been something more than the weather to have caused the disease to assume such a virulent form within narrow limits in a single neighborhood. It was noticed that the water-closets in that vicinity were in a state of lively fermentation, and that the atmosphere was ladened with gases having a peculiar sour and offensive smell.

The Board of Health took the matter in hand and all vaults and drains in the infected district were freely disinfected with chloride of lime, and it was directed that strong disinfecting solutions be kept in the chamber-utensils used by the patients having dysentery. The foul smells that had impregnated the atmosphere disappeared at once, and, so far as the writer has been able to discover, but one new case of dysentery, and that a very mild one, appeared in that vicinity during the remainder of that season.

Thus an epidemic, which was extending itself at the rate of several new cases daily and was developing a very large ratio of mortality, was cut short, and ceased to exist as an epidemic, in a single day. It appears likely that faulty hygienic surroundings and inadequate treatment of diarrhœal difficulties in the case of the family first attacked were the starting points of the whole trouble. Soon the atmosphere became contaminated with poisonous germs whose presence could readily be detected by the sense of smell. Either these germs or the products of the putrefactive changes set up by them were the direct means of propagating the disease. Powerful chemical disinfectants rightly applied and in sufficient quantity certainly proved effectual in destroying the contagion. The efficacy of the remedies found to be most beneficial in these cases may also be explained on the same principle of action. Gentle purgatives or copious rectal injections at the outset of the disease modify its course very favorably. The bowels having thus been cleared out and disinfected, healing may be promoted by the use of astringents and by the use of opiates to quiet peristaltic action and secure rest to the parts that have been irritated.

PISTOL SHOT WOUND OF SPINAL CORD.

By Wm. J. Falkner, M. D.
Youngstown, N. Y.

July 11: Called to see J. S.—— a few moments after receiving a pistol-shot wound in dorsal region. Found patient (rather undersized boy of thirteen years of age) lying on floor unable to move. Had him removed to his home, and (in the presence of Dr. Arthur, U. S. A., who had been sent for in consultation) stripped and examined him.

The ball (a small 22-calibre shot from a cheap, poorly-made revolver) had taken effect in the back, entering at about the level of the spinous process of the tenth dorsal vertebra, almost exactly in the median line. Complete paraplegia had occurred immediately after the shooting, and on examination anæsthesia of the lower extremities was found to be absolute, extending from the line of distribution of the ninth or tenth intercostal nerves to the feet.

An attempt was made to explore the wound, but the probe, after running half an inch downwards and forwards, met with such resistance that the attempt was abandoned. Patient was in fairly good condition; shock not very marked; pulse strong, regular and not very rapid (84). Complained of considerable pain in epigastrium. Was given morphia $\frac{1}{6}$ gr., and brandy from time to time, and wound lightly dressed with carbolized water. Passed the night well, though it was necessary to repeat the morphia several times before morning.

July 12: Pulse 85, temp. 99.5. Drew off xvj clear normal urine. Bladder completely paralyzed; water coming away drop by drop.

July 13: Pulse 70, temp. 100.4. In the evening drew off one pint of healthy urine. Complains of peculiar sensations in lower extremities as though some one were pulling his legs, and feels a sensation of twitching while the extremities are perfectly motionless. A strongly-marked line of hyperæsthesia noticeable at the line of junction between areas of normal and abolished sensation, (*i. e.*) in the track of the ninth or tenth intercostal nerves.

July 14: Temp. normal; ℥xvj urine drawn off, very strongly ammoniacal. Later in the evening became fretful and peevish; pulse

slow but not so full as before. Drew off with great difficulty two or three ounces of urine, which for the first time, was found to be loaded with pus and blood.

July 15: Had vomited several times during the night. Pulse 70, temp. normal; bloody purulent urine dribbling away constantly from over-distention of the bladder; involuntary passage from bowels. Drs. Skinner and Arthur called in consultation. Bladder relieved by means of aspirator of ℥xxxij of bloody, purulent urine which on examination was found to be strongly alkaline, of a dark red color, full of floating coagula; deposited heavy coagulum of albumen on heating. Microscopical examination showed abundance of red blood copuscles, pus corpuscles, epithelial scales, débris and rectangular crystals of ammonio-magnesian phosphates.

From this time to the 18th there was no decided change. The urine continued bloody, and was drawn three times a day with the aspirator. In the evening of the 18th the patient complained of chilliness. While drawing off water chill returned, lasting three-quarters of an hour, and was followed by a sudden rise of temperature from subnormal to 103°, the pulse running up at the same time from 64 to 120.

July 19: Pulse 80, temp. 98.

July 20: Pulse irregular, 76 to 80, temp. 100.4; involuntary passages of bowels; slight redness over sacrum, threatening bedsores. Towards midnight temperature rose to 103.2.

July 21–24: No marked change; temperature declining from day to day.

July 25: Extremities becoming cold; vomited three times during the day.

July 26: Severe chill in the morning; pulse 120, temp. 101.5; began giving hypodermic injections of brandy.

July 27: Extremities cold; pulse small, 100; temp. subnormal, 96.5; had choking sensations about 5 P. M.; seemed to be moribund, but revived under hypodermic injections of brandy.

July 28: Sinking rapidly; pulse very small; 5 A. M. no pulse perceptible; dyspnœa; died at 5.30 A. M.

Post-mortem, July 29, 9.30 A. M. Time after death, twenty-eight hours. Body very much emaciated; rigor mortis passing off.

Wound of entrance of ball almost completely healed; scar almost exactly in median line of body, viz., slightly to the right of spinous process of tenth dorsal vertebra. Long incision made over spinous processes from third dorsal to third lumbar vertebræ. Spinous and transverse processes dissected out, and spinal canal opened by breaking through laminæ from fifth dorsal to second lumbar with bone forceps.

Track of ball could be traced on lower edge of right lamina of tenth dorsal vertebra, a small piece of bone being chipped off and presumably driven before the ball into the cord. The spinal cord then removed for two or three inches above and below point of injury. At point opposite upper part of body of eleventh dorsal vertebra, complete perforation of the cord was found, with considerable softening above and below point of perforation. Careful examination of anterior wall of spinal canal showed roughened bone on upper portion of body of eleventh dorsal vertebra, and on scraping down, the ball was discovered firmly embedded in the substance of the bone. It was removed and found to be but little altered in shape.

Abdomen opened. All organs found in healthy condition except the right kidney, which exhibited signs of considerable congestion, ecchymosis and softening. The pelvis was filled with purulent urine. The bladder was dark and filled with putrid urine, pus and blood. The chest and cranial cavity were not examined.

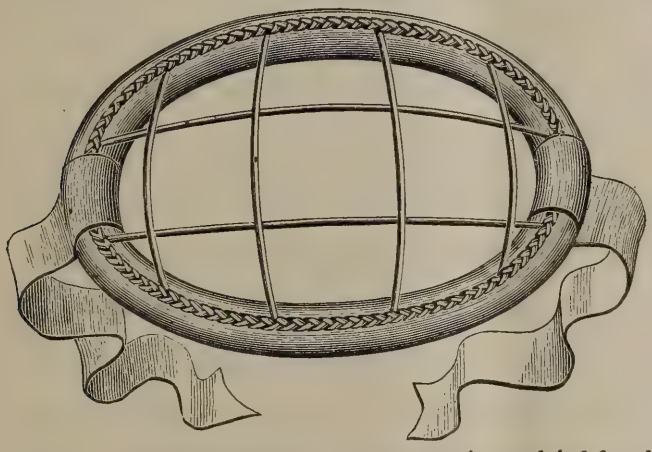
A PROTECTIVE SHIELD FOR THE EYE.

BY LUCIEN HOWE, M. D.

Clinical Professor of Ophthalmology, Med. Dep't, Univ. of Buffalo.

The appliance to which I wish to call attention is as simple as it is useful. It consists of nothing more than a wire shield, which, fastened over the eye, prevents any injury to it. This shield is elliptical in form, measuring about three inches long by two and a half wide. Its strength is of considerable importance, and for this reason it is better to have the wire about an eighth of an inch thick,

crossed in wide meshes, and firmly soldered at the points of contact. The whole is bent so as to be convex anteriorly, and with slight adjustment can be fitted to the brow and cheek, so as to rest equally upon these parts, making no pressure upon the bandage which may cover the eye. For the sake of comfort, also, it is advisable to have the circumference well padded and covered with chamois-skin. It is adjusted in place by having a tape attached to each end of the long diameter, and bound around the head. If necessary, for the sake of additional security, still another tape can be attached obliquely, passing upward over the forehead and downward behind the ear on the opposite side. The whole arrangement is similar to such protective bandages as are sold by some of the instrument-makers for binding over the arm after vaccination. In the general idea there is nothing new, but in its application to ocular surgery I do not think this has received the attention which it deserves. It is especially adapted for protecting eyes of a child after injury from accident or operation. We all know how difficult it is to prevent such a patient from disturbing the bandage or rubbing the eye violently. In many cases, it is necessary to tie the hands to avoid this. But with such a protective shield, the little patient can be allowed the utmost freedom, secure, as we are, that when this is properly adjusted, the eye can receive no injury. It is also useful after operations upon adults; for example, cataract, artificial pupil, or similar procedures which require opening the globe of the eye. In such cases it is not unusual that the patient, by some accidental violence, or even by turning the head suddenly upon the side of the affected eye, so disturbs the bandage or makes pressure upon the globe as to open a wound which might otherwise be healing. A considerable experience has shown it to be of much practical value.



The Medical Press

OF WESTERN NEW YORK.

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EDITED BY

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WITH THE ASSISTANCE OF

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BUFFALO, N. Y., NOVEMBER, 1885.

SALUTATORY.

WE ARE well aware that the combination of circumstances which can call for the establishment of a new medical journal must be almost as rare as the actual need of a new medical college, and that neither should be undertaken without good and sufficient reason. Yet when the medical profession of a large city rise almost as one man and endorse financially the reiterated demand of very many individuals for something in the way of a local journal, which shall fulfill every requisite as a high-class and respectable representative of the best professional work and thought of a very large and intelligent community, then it would appear that there obtains such need as must find satisfaction in the appearance of something calculated to satisfy such demand.

It is probable that never before in the history of the profession of this country have nearly a hundred medical men of one locality gathered together with such unity of purpose, such expression of interest, and such readiness of financial support, as were apparent among those who, either in person or by proxy, met early in August and incorporated THE MEDICAL PRESS ASSOCIATION OF WESTERN

New York. This action was taken with a view to the foundation of a medical journal which should be of scientific rather than political character; which should aim in its editorial capacity to do justice to all and vent spite upon none, and in which might find expression the best work and thought of the community in which it appears.

* * *

The very occurrence of such a meeting is in itself memorable. At this meeting the general policy of the new journal was outlined, and it is only right that this be made as public as possible.

By force of circumstances the stock is mostly held in Erie County, where the Association has its corporate existence. It was most justly held that there being so many individuals interested as stockholders, there would be a much more wide-spread personal interest in the journal than if it were the private property of any one man. Also, that its ownership being so general it could never become an organ of a clique or party. It was furthermore intended that community of interest in its success should act as a cohesive element among the profession by whom it was originated, serving to bind together rather than disrupt professional ties.

While having its origin in the City of Buffalo, it is by no means intended to be so local in its character. It is designed to be a journal which shall represent the profession of Western New York and adjacent territory as they have never yet been represented. To this end, eminent gentlemen in Syracuse and Rochester have been associated in the enterprise, as the names of Prof. Ely Van de Warker and Dr. Herriman eloquently bear witness. These gentlemen have most kindly promised to assist in furthering the interests of The Medical Press, and we have no doubt that their literary aid will be as gladly welcomed by its readers as it is heartily appreciated by its home conductors. It is also intended that it

shall be the repertory for matters of interest in these and other cities, as well as the organ of the various county societies in the western part of the state.

* * *

With questions of medical politics, as such, this journal has nought to do. We consider it by no means the function of a medical monthly to manufacture or endeavor to guide professional opinion. If this must needs be done, let the task be relegated to those weeklies which so cheerfully assume it. On matters of scientific interest, we trust, this journal will always be ready to speak editorially; as well to commend and encourage that which is truly scientific, as to rebuke that which savors of charlatanry and sycophancy.

* * *

Remembering the vast deal of foreign literature which merits translation into our vernacular, we shall not hesitate to present, nor apologize for the appearance of interesting and important articles from current European journals. Further than this our readers will doubtless appreciate our complete arrangements by which we shall be able to present a wide range of foreign correspondence, and of original articles from the medical centers of Great Britain and the Continent. Besides these, domestic correspondents will furnish items of interest from various parts of our own country.

Of contributions from nearer home there shall be no lack. These shall consist of original articles, clinical lectures and reports, society reports and items of general or local interest. Those who appreciate the size and medical wealth of Buffalo alone, and the remarkably intelligent and cultivated community of which it is the geographical center, will see that there must soon be an embarrassment of riches in this respect. To this community we appeal for

literary and financial support. To be sure, the backing of a stock company, the stockholders being exclusively medical men, puts the mere question of financial success beyond a peradventure. But this Association is not working for mere pecuniary return, and we can promise our readers that every dollar of subscription money received shall become part of a trust-fund to be expended in the improvement of the journal and the dissemination of information. Let it be the role of the large and excellent metropolitan weeklies to serve as advertising mediums for the publishing houses which control them. THE MEDICAL PRESS ASSOCIATION OF WESTERN NEW YORK has nothing to advertise, neither man, nor clique, nor books; nothing save the fact that it has undertaken the publication of a first-class medical journal, *of the profession and for the profession*, and deems that in this fact it finds its sufficient *raison d'être.*

Kind reader, what think you?

MEDICAL DEPARTMENT, UNIVERSITY OF BUFFALO.

We regret to have to chronicle that Prof. Wm. H. Mason, so long Professor of Physiology, was compelled by the condition of his health to send in his resignation during the past summer. Prof. Mason was well known throughout the country as one of its ablest expositors of the *object lesson* method in teaching physiology. Physiology without experiments and vivisections is much like arithmetic without a slate and pencil. One happy experiment will do more to fix a fact or a number of facts in a student's mind than several hours of close application to a printed statement of the same. Fully alive to this, Prof. Mason's lectures were probably more fully illustrated than those of any other teacher in the country. His rich acquaintance with French physiological literature and experimental technique made him in time past an extremely able teacher, and his course of lectures one never to be forgotten.

And now, inasmuch as he has seen fit to withdraw from active didactic labors, we can do no less than express our regret at his re-

tirement, and wish him improved health and that happy *otium cum dignitate*, which should always be the reward of years spent in the education and training of others. In which good wishes we know that a host of old pupils and other friends will join.

If anything could diminish our sense of loss it would be the appointment to the chair thus vacated, of Dr. Julius Pohlmann. He has not only been for several years Prof. Mason's adjunct, but is most widely and favorably known as the genial secretary of the Buffalo Society of Natural Sciences, and as an authority in biology, comparative anatomy and geology. With a mind richly endowed, and with unusual energy and patience, he will bring to bear on his new position all those qualities so necessary in the successful teacher; while at the same time he is committed to the traditions of the past in that he will also follow the experimental method in physiological teaching first laid down by Prof. Dalton while in the same chair.

FERRAN AND HIS INOCULATIONS AGAINST CHOLERA.

It is always an ungracious task to have to show up a charlatan, especially when the person thus exposed has posed before the public as a benefactor of his race, and has secured position and esteem thereby. While there is still a possibility of doubt in the case of Dr. Ferrán, the report of the Sanitary Commission sent from Germany to study his methods and results seems a most damning one, the recent non-committal bulletin of the French Academy to the contrary notwithstanding. This latter is comprehensive in that it fails to commit the Academy to any opinion save that the disease which has recently terrorized Spain is genuine cholera Asiatica, which, we surmise, is admitted by all.

On the other hand, the Germans found that Ferrán, as judged by his work, was devoid of all exact knowledge of bacterial study and investigation, deficient in elementary knowledge of the subject, his methods puerile, his means insufficient, his results worthless, and his deductions of practically no scientific value. Moreover, instead of giving that aid which might naturally have been expected of him, he declined to answer questions or to facilitate investigation,

and obstructed rather than facilitated inquiry. And this action of his seemed directed less by personal feeling than by fear of discovery and exposure. Further than this there was not wanting one investigator—more shrewd than honest, perhaps—who disguised himself as a peasant and submitted to the inoculation. Hastening away and examining the "vaccine," he claimed it to consist largely of elaterium and other violent irritants, which also were found in the pills he was ordered to take subsequently.

If this be authenticated, it is certainly enough to condemn the man and his practices. For the sake of truth and decency in scientific matters, let us hope that this is a newspaper story. But even without this, circumstances are scarcely favorable for Ferrán's reputation. If hereafter it shall appear that he has been maligned, we shall not be slow to do him whatever honor he may have merited.

WELL MERITED HONOR.

It will be a pleasant item for many to read that Dr. W. C. Barrett, D.D. S., of this city, was recently chosen, at the Minneapolis meeting, to be the next president of the American Dental Association. To those who know the doctor, and the sturdy energy with which he has built up our valued exchange, *The Independent Practitioner*, and made it a representative journal of its class, this honor would seem to be one more to the Association than to himself. We extend our congratulations, then, equally to them and him.

OUR NEW CREMATORIUM.

The Buffalo Cremation Company have recently closed a contract with Signor Joseph Vanini, of Milan, for the erection upon their grounds, corner of Delaware and Delavan avenues, of a complete cremation furnace of his latest plan, which, along with the buildings of neat architectural design, it is expected will be finished and ready for operation by the end of the year.

In this connection we would say that we expect to be able, within a short time, to present our readers a valuable paper on the subject of cremation, regarded more particularly from the standpoint of the hygienist and physician, from the pen of Dr. Chas. Cary, the president of the company.

NOTICE.

In order to make The Medical Press of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

Foreign Correspondence.

LETTER FROM WÜRZBURG.

Würzburg, Sept. 10.

Editor of the Medical Press :

In undertaking to tell of the famous medical school here, and of its teachers and methods, it is very hard to know where best to begin. As you well know, it is in some respects among the most famous of the Continental schools. The great hospital—the *Julius-Spital*—is one of the wealthiest institutions of its kind anywhere. It was founded some three centuries ago by a local bishop, and its property is now estimated at some nine millions of marks, or two and a quarter million dollars. The stories of the stores of wine accumulated in its vaults have an interest scarcely professional, and I will not intrude them here. The university was founded by the same bishop, but a few years later, and is attended by seven or eight hundred students. It is most famous in its medical department, and this latter especially in its anatomical and pathological institutes and museums.

But, first, of the hospital. It was so firmly and admirably constructed that there is, as yet, no sign of its requiring to be supplanted by a new one. But it has some most unfortunate defects, and one of these is its operating room; this is perhaps only 30 by 40 feet in entire dimensions, while the space for patient and operator is only slightly larger than a very small bed-room. There are in it no seats, for the students stand on a raised platform surrounding the operating space; besides this there is a gallery so arranged that from it some fifty students can gaze directly down on the operating table. The whole room can not comfortably contain more than seventy-five spectators; yet I have seen more than one hundred and

fifty crowded into it. The medical clinic is much larger, and all that can be desired.

The pathological institute is perhaps ten years old; and, though of somewhat unattractive exterior, of most admirable interior arrangement. In the museum are at least three hundred skulls, representing every pathological condition. The series of fractured skulls were to me of greatest interest, since among them are some remarkable specimens. For instance, there is one from which the whole left parietal eminence through the whole thickness of the bone had been chopped away by a saber stroke, in spite of which the large fragment, by immediate apposition, retained its vitality so well as to become again united to the skull by firm osseous union.

The anatomical institute is a remarkably fine structure—the finest of its kind, in fact, in existence. It has one very large amphitheater, handsomely furnished, and so arranged that each auditor has a desk before him. Besides this, there is one room, arranged for standing only, for demonstrations in topographical anatomy; another for the surgical-operation course; another for the eye-operation course; another large room where Maas delivers his lectures in the winter-semester, and a large hall for microscopical work, in which at least eighty students can easily be accommodated. Besides this, there is a reading-room furnished with a dozen anatomies, and periodicals relating to anatomy and embryology. Then Koellicker has his "office", as well furnished as a parlor, a large working-room and an examination-room. Then Prof. Stoehr has his working-room; then come four assistants, each having his own working-room; two of these have sleeping apartments. Then Prof. Rabus, a teacher of artistic anatomy, has a room in the building. The anatomical and embryological departments employ two professors, four assistants and five servants. The dissecting-room itself is, unfortunately, a little small. The museum numbers thousands of different specimens. At one demonstration of placentas I counted forty-seven. They were all beautifully injected. I wonder at the large variety of colored injection fluids that they have.

With such arrangements it is no wonder that they can do so much original work; moreover, a professor's salary, or, rather, yearly income (there is a fixed salary, but besides this, all the lecture-

fees belong to him; so, you see, the more students attend his lectures, the more money flows into his pocket) is far in excess of what a general practitioner can make. Rindfleisch, perhaps, earns as much as 16,000 mk., while Koellicker goes a little better than that. This is an enormous sum for this country; and one must consider that these men have no private practice whatever, and obtain such incomes entirely from the university.

During the past year I have neglected literature somewhat, so that I am not fit to pass a reliable opinion, especially on German books, of which there are constantly so many new ones being issued that it is inexplicable to my mind how they find a sufficient sale to pay expenses. Perhaps it is simply for the glory of the thing, for every professor, *privat-docent* and assistant seems to think it necessary to publish a book on his branch.

Mosetig-Moorhof has written a book on Surgical Technique, of which the second "*lieferung*" has just appeared. It is well published, with numerous illustrations, and everything is described with great care and exactitude. Of course the iodoform dressing receives the first place, still nothing is passed over,—even Lister's sero-sublimate gauze is considered and recommended. Rectal anæsthesia is adversely spoken of. The electrical bullet-probe and all other new instruments receive mention. Tendon-suture receives eight pages. It is a book that will be of especial value to general practitioners who find it difficult to keep up with all the literature of the day.

Löbker, assistant in Göttingen, has written a book of 700 pages, profusely illustrated, on operations on the cadaver. All the new operations, like stomach resection, etc., are fully described. It is so written and arranged that it may be used as a handy reference-book in regard to all operations. Then, Lossen, of Heidelberg, is issuing a new edition of Hueter's Surgery; and, last of all, Schüller, of Berlin, so well known for his researches on tuberculosis of joints, is issuing a remarkably excellent Surgical Anatomy, with special reference to diagnosis, pathology and treatment, the first volume of which I send you.

Prof. Gerhardt's removal to Berlin will be a severe loss to this university. As a diagnostician I don't think that he can be excelled. A few days ago he showed a case of progressive myositis ossificans.

It was a girl about 25 years old; every muscle was solidified, in fact, one might say that she is a living statue. The only voluntary muscles that she can move are those of the fingers. When her back is percussed it sounds as if solid stone were struck.

Gerhardt has lately employed a treatment for lupus that appears to be very valuable. He applies ice-bags to them during the greater part of the day. He recently showed four cases that were entirely healed over by a very fine elastic scar. He got the idea by arguing that, since lupus is produced by the tuberculosis bacilli and since the activity of these is greatly diminished by cold, by the employment of this his patients might be more benefited than by any other measure. Of course the spores of the bacillus are not so easily affected; but such objections are always to be found in every kind of treatment. That cold, continuously applied, penetrates inwardly, he has demonstrated by taking the temperature in both sides of the mouth after the ice-bag had been applied to one of the cheeks for some hours. He found the difference to be as much as 3° Centigrade, in some cases. The attained results certainly speak well for the method.

I had intended to write you my impressions of our surgeon, Prof. Maas, who took the place left by Bergmann, who himself took Langenbeck's clinic in Berlin, but my letter has already reached a reasonable limit, and I will, accordingly, defer this until a later one.

Sincerely yours,

OTTO L. SCHMIDT, M. D.

TUBERCULOSIS MENINGITIS FOLLOWING LUPUS.

A CASE apparently proving clinical identity, and at the same time speaking for the tuberculous nature of many—if not all—cases of lupus, is one reported by Doutrelepont in a recent number of the *Deutsche Medicinische Wochenschrift.* A girl of eighteen had lupus of the face in several places, and a scrofuloderm of the throat. In specimens from each of these tubercle bacilli were demonstrated. Curetting and local applications of corrosive sublimate, with tonics internally, caused rapid improvement, and cicatrization was proceeding satisfactorily. Suddenly headache and vomiting super-

vened, and typical meningitis ensued. A sample of blood showed also tubercle bacilli.

At autopsy a beautiful picture of tuberculous meningitis was revealed; the pia was studded with translucent miliary nodules; tuberculous foci were found in the lower lobes of both lungs; ulcers were present in the ileum; and the blood in the heart and jugular veins was full of bacilli.

Of course the only inference which can be drawn from these facts is that the local lesions were the source of the general infection.

Society Proceedings.

AMERICAN SOCIETY OF MICROSCOPISTS.

Annual Meeting Held at Cleveland, Third Week in August.

Special Report for The Medical Press.

The recent annual meeting of this young but flourishing association was held at Cleveland, and was well attended by microscopists from all over the country. It is a body which is open to every medical man who is interested in microscopy—and every one should be—and we regret that there are not a larger number to take advantage of its opportunities. A feature of late meetings has been what is known as the "working session," at which thirty or forty of the most competent and expert workers spend the afternoon, each at his table in some large room, demonstrating some particular method of cutting sections, staining and mounting them, or staining or cultivating bacteria, making cells, etc.;—all methods with which the histologist must be practically familiar. Attendance on this working session alone will repay a journey to the meeting place.

At the recent meeting, a number of papers of peculiar interest to medical men were read, a brief abstract of two or three of them being here presented.

The first of these was by Dr. L. M. Eastman, of Baltimore, Md., entitled, "Some Remarks on Fatty Infiltration of the Liver." It was briefly as follows :

Fat infiltration of the liver is that condition of the liver in which fat accumulates in larger or smaller drops in the interior of the parenchymal cells, without be-

ing caused by a morbid condition of those cells. So frequently does this condition exist, both in health and disease, that the liver has been called the fat reservoir of the system. The chemical composition of this fat is identical with that found in other parts of the body, and its consistence, and, consequently, that of the liver as a whole, is the same in the relative proportions of the glycerides of stearine and oleine. Professor Schroeppel, in speaking of the origin of this fat, states that it is either brought to the liver cells with the blood or that it originates in the interior of the cells themselves from the albumen belonging to them. When the albumen thus expended in the preparation of fat is at once restored, so that the glandular cell retains its normal proportion of albumen, fat infiltration is produced; but when this restoration does not take place, the cell degenerates into an abnormal condition, and we have what is known as fatty degeneration. The color of the fatty liver is paler than the normal tint, presenting a yellowish or greenish-yellow appearance. In size, it is either normal or enlarged, whereas in fatty degeneration, owing to the irreparable loss of albumen, we have shrinkage,—hence the term, yellow atrophy. Although fat infiltration of the liver is not produced by any abnormal condition of the secreting cell, it is most frequently associated with, or caused by disease in other organs. Indeed, there is scarcely a malady in which the liver has not been infiltrated with fat. These affections in which the blood is characterized by the presence of a large amount of fat, and from which we can separate a turbid milky serum, are those in which the liver most frequently, and to a greater extent than usual, becomes filled with fat. Pre-eminently at the head of the list we have pulmonary tuberculosis and the drunkard's dyscrasy.

A paper that created as much discussion as any read at the morning session, and which was probably of as much practical importance as any, was offered by Dr. Thomas Taylor, of Washington, D. C., the microscopist of the Agricultural Bureau, on "Butter and Fats—or, How to Distinguish One Fat from Another by Means of the Microscope." Dr. Taylor first stated that any person experienced in the use of the microscope could distinguish the fats of various animals and of vegetables. He then explained his methods of examining lard, beef-fat, and butter, and described the appearance of their pure and impure conditions under microscopic treatment. In conclusion, he said:

"The globular crystals of butter, when kept for a month or more, seem to bud like a vegetable spore, and frequently every round crystal will show projecting from each a smaller crystal. The globular forms generally vary from fifteen ten-thousandths of an inch to the one-hundredth of an inch in diameter. These forms are never seen in pure beef or lard fats. Care should be observed not to press the crystals flat, especially the globular crystals, as the cross is not seen when severely pressed. Butter crystals vary slightly from each other in size and in some other slight particulars, such as color. A butter received from Tennessee, made from milk of Holstein and native breed, shows on its crystals indentations; a condition represented in no other butter yet observed. The butter crystals seen in the butter made at Mr. Frank Ward's dairy, from milk of Alderney cows, of Washington, also differ in some particulars from all others examined, being darker in color, spines longer, and of larger size."

Dr. Taylor has examined quite a number of other fats, vegetable and animal, and finds, thus far, that animals and vegetables of distinctly different genera, and even species, yield fats which give typ-

ical fatty crystals characteristic of the animals and plants which yield them, and he is confident that his new discoveries will prove highly useful to microscopists and chemists when investigating adulterated substances used as food or in medical preparations. Many scientific men have urged him to continue his investigations, the result thus far being highly appreciated.

In view of the unsatisfactory condition of the matter of distinguishing fats under the microscope, as evidenced particularly when the famous "lard case" was on trial in Chicago, these statements of Dr. Taylor's are destined, if substantiated, to put the determination of fatty acids, and the detection of adulterations, within the power of almost any one possessing a fair microscope and fair ability. So much interest was excited by his paper that, on motion, a committee of five experts was appointed to go over the doctor's work with him and report. Even before the adjournment of the society this committee made a preliminary but most favorable report.

A paper of unusual interest was read by Dr. H. T. Detmers of Champaign, Ill., and was entitled, "Poisonous Dried Beef." In it the writer related his experience in Chicago in the detection of poisons in meats of different kinds. He spoke of one case of wholesale poisoning which occurred in Illinois, resulting, as was afterwards discovered, from dried beef procured at one of the Chicago markets. He referred to his investigation in the Chicago stock-yards, among the cattle killed there, in an attempt to discover the causes of various poisons in animal food. As the result of his examination Dr. Detmers came to the conclusion that the animal or animals from which the beef was taken must have either been injured by being trampled upon in the cars, and butchered when in a dying condition, or killed while in a frenzied state. In the case of a deer chased to death by dogs, poison has been found in the venison. Dr. Detmers alluded to the Chicago health officers and the carelessness which they were guilty of in allowing cattle that had been trampled to death in cars and in yards to be killed and the beef put on the market and distributed throughout the country. Of ten thousand hogs that Dr. Detmers examined, nearly five per cent. were found to be affected with trichina. The doctor urged the necessity of greater care by officers whose duty it is to examine into these matters, and

who are clothed with sufficient power to protect the public from unhealthy beef. He strongly advocated the burying of all dead animals, to remove the danger of contagion.

It may be of interest to state that Dr. D. takes the ground—now common—that the poisons thus generated in meat are ptomaines, and that, instead of making favorable soil for bacteria, they are excrementitious products, and are the direct result of the presence of bacteria.

A lecture on "Cultivation of Bacteria, with Special Reference to the Micro-organisms of Cholera," was delivered by Prof. Lester Curtis, of Chicago. It was of absorbing interest to all present, but as it was not written out, can hardly be summarized here.

Other papers of interest to the profession, were those by Prof. Gage, of Cornell University, entitled, "Notes on the Blood Corpuscles of Necturus," and "Notes on the Epithelium of the Mouth of Necturus"; "First Development of Muscle in Embryos of Chicken and Man," and "Studies on the Development of Cartilage in the Embryos of Chicken and Man," by M. L. Holbrook; and "Two Cases of Tumor in the Mammary Gland of the Lower Animals," by Prof. A. H. Tuttle, of Columbus.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, September 1.

Reported by Chas. G. Steele.

The president, Dr. Charles G. Stockton, in the chair. Dr. Stockton said he had learned that, by a vote of the members taken some years ago, all proposals for membership were required to lie on the table for one month, and that hereafter the Association would be governed by that vote.

Dr. C. C. Frederick asked to be excused from reading his paper on "Epithelioma Complicating Labor," as he was quite ill. He was excused, and the paper will be read at the October meeting of the Association.

Under the head of Voluntary Communications, Dr. Frederick

related a case of a negress, aged about 30, whom he saw at the penitentiary, who was suffering from incontinence of urine. The incontinence began four or five days after she had been kicked on the vulva by her husband. The doctor examined the parts and found that the urethro-vaginal septum had entirely sloughed away, up to the neck of the bladder. He readily introduced his finger into the bladder. The woman gave a history of having had a fetid discharge from the vagina about five days after the kick. The incontinence began at that time. The doctor could not then undertake an operation, as the woman was a short term prisoner.

Dr. W. W. Potter said he thought a successful plastic operation could be performed, provided the cicatricial tissue was not too thick. Such cases usually undergo thorough repair, and he thought the new sphincter which would be formed by the operation, would serve to prevent further incontinence.

Dr. Frederick said he made an examination of the parts, with the woman in the Sims position, and he thought that the edges of the wound could be pared off and the urethra completely restored.

Dysentery, cholera morbus, the various summer complaints of adults and children, and malaria, were reported as the prevailing diseases. Dr. F. H. Bartlett thought the city's health was better at the present time than it was a year ago.

The Association then adjourned for one month.

Selections.

THE CONDITIONS WHICH PREDISPOSE BONE TO TUBERCULOSIS.

ROSWELL PARK, M. D.: In *Annals of Surgery.*

Des Conditions favourables ou defavourables à la tuberculose osseuse. Par M. Charpy. (*Revue de Chirurgie*, September, 1884, p. 689.)

WE REGARD this paper of Prof. Charpy, which it is our intention to review this month, as deserving much more attention than it seems to have received, and for this reason shall summarize its contents at some length.

For a long time, those who make a business of preparing anatom-

ical specimens have been accustomed to divide bones into three classes, as follows:

Red bones; more vascular.

Yellow bones; more fatty, both to the eye and the finger.

White bones; more dry, eburnated, less vascular, found especially in consumptives.

This classification is a practical one, though difficult to justify in theory. Sometimes a given specimen will scarcely belong in either class; while, too, there are certain fine distinctions, since all red or white bones are destined to become yellow during the old age of the individual; and, again, in anæmic, albuminuric, or other patients, all these distinctions may be lost. Nevertheless, for present purposes, the classification may be allowed to stand.

I. Red or Vascular Bones. These are, in most cases, and to all intents and purposes, young or fœtal bones; the latter containing a deep tinted marrow, to be sure, but, whether wet or dry, it becomes lighter, since it is not deeply impregnated with either fat or blood. Whilst red bone, when fresh, "sweats" blood, as the others do greasy matter, the same bone when dry turns to a dark color. These red bones, of powerful construction, with strongly marked surfaces and well supplied with vascular canals, are but slightly predisposed to tubercle. Richly vascular organs, as a rule, do not accommodate themselves to tubercle, any more than those which are slightly so. Thus, in the lungs, the apices, which are usually first affected, are less richly supplied with blood than the bases. It is well known that the chronic congestive and catarrhal bronchites, which would seem to afford a propitious lodging-place for microbes, rarely lead to phthisis. Rindfleisch is by no means the only one who believes that in order to cure tubercle it is only necessary to create a hyperæmia.

This apparent aversion of tubercle for blood is, perhaps, in reality, an aversion for oxygen. Numerous facts and observations give plausibility to the view that the infectious element is an anærobic organism, preferring a restricted atmosphere. In all the centuries that have elapsed since curative remedies have been sought, nothing has been found better than pure air.

The practice of M. Ollier, whose opportunities are so vast, is

based on this principle; in every lesion suspected to be tuberculous, caries, white swelling, fungosities, etc., the general plan of procedure has been the same—*i. e.*, extensive opening of the *dépôt*, exposure of the diseased surface, stimulating irrigations. It is on this account that this surgeon rejects all partial resections in cases of tumor albus, not desiring to leave behind any focus of disease or infectious fluids. It is for this reason, also, that he opposes rapid, complete union, but leaves numerous drainage openings with drains of large size, allowing the latter to remain a long time.

And so, in summing up the values of the complex elements entering into this therapeutic procedure of resecting and operating according to Ollier's methods, the necessity for revealing and unearthing the numerous foci of disease, the indifference of drugs, the necessity of drainage, the rapid improvement which country air permits, the recedives when drainage is interfered with—one is justified in asking if the entire therapeusis in these cases cannot be included in one term—*aeration.*

But to return to red bones. There passes through them too much blood—that is, too much oxygen—to allow tuberculosis to develop to advantage. Virtually the same influences are felt in different parts of the skeleton. The frequency of lesions in the hands and feet may be due to their distance from the circulatory centers. So it happens in each bone in children; tuberculous lesions are most frequent in least vascular parts—*i. e.*, about the epiphyseal junctions. When at such junctions lesions do occur, it is at a time when the osteogenetic process is drawing to a close. Thus, in the excellent thesis of Goullioud (Lyon, 1883), it appears that about the pelvis post-pubertic marginal tuberculous ostitis appears to become more frequent in advancing from the twentieth to the fortieth year; the epiphyseal margins, which appear at the fifteenth or sixteenth year, having united by the twentieth; by the twenty-fifth year the union is solid, and circulatory activity, previously provoked, is on the decline.

II. Yellow or Fatty Bones. All marrow begins as red marrow, with one or two per cent. of fat, and ends by becoming yellow, with sixty to seventy per cent. of fat; and whether this change shall take place slowly or rapidly depends on diverse conditions, es-

pecially on that which is known as fatty necrobiosis or degeneration —adiposity. This condition is not perfectly established until the time when the full growth of the individual has been reached—say the thirtieth year, or thereabouts. But this tendency to adiposity is known to lessen in proportion, according to growth, as puberty is reached. In adolescents, we see the marrow of the large, hollow bones turning orange or brownish color, while in the hands and feet, or in the scarcely united epiphyses (trochanters) it is manifestly fatty. These variations undoubtedly bear a relation to the somewhat sluggish character of the blood-current through the bones. Indeed, Bourgery has said that bone is simply a large, cavernous arrangement, where stagnation of the blood-current favors the deposition of fat.

The rule which regulates this change is, that adiposity progresses from the periphery to the center, gradually approaching the region of large vessels and the heart. Thus, the hands and feet undergo the change before the forearms and legs, and the latter before the thighs and arms; the bones of the trunk (pelvis, ribs, vertebræ) receiving their blood in a more direct way, remain "red bones" much longer than the others; and the individual whose sternum has become a really "yellow bone" must have reached a ripe old age. So, in a given long bone, its distal extremity will become fatty before its center, and the epiphysis before the neighboring diaphysis. One sees the greasy epiphyseal spot diffuse, as it were, across the lamellar partitions of the old cartilaginous junction, and extend as a layer into the bordering bony territory going toward the fat already in the medullary cavity. Those juxta-epiphyseal regions, which are nourished by large vessels (the latter often as large even as the principal nutrient artery), resist the change much longer—often until advanced life is reached.

This fatty change is slow or rapid, according to individual peculiarities, just as is the formation of points of ossification, or the union of epiphyses. Thus, the femoral neck will sometimes be fatty and friable at the fortieth year (an anticipated local senility), or firm, rigid and still "red" at the eightieth.* Fatty infiltrations are

*The temptation is a strong one to devote a little space here to the consideration of the bearing of these facts on the general subject of fractures of bones, especially of the femoral neck; but we feel that we must simply follow our author, at least in this place.

variable also in color and consistence. The former is certainly due to the amount of contained blood, so that even a streaked appearance may be sometimes noted. Temporary appearances of this nature may be, moreover, caused by the artificial anæmia caused by the Esmarch bandage; it would be of interest could we know how many times, under these circumstances, in fatty and softened bone, has the pale appearance owing to arrested circulation been ascribed to a purulent infiltration.

This fatty transformation takes place by degrees, and by numerous points of attack at the arterial terminations; while, owing to these conditions, peculiar color appearances and effects are sometimes produced. One, therefore, in describing morbid changes, should be very careful about speaking of congestion, infiltration, etc.; and it should be remembered that exposure to air of a fresh section will very materially affect the tint.

The fatty condition above described must not be confounded with rarefying processes in bone, which are also the effect of age. The two, though often associated, are not necessarily parallel. Fatty adult bone is not rarefied; all its lamellæ and trabeculæ are preserved; it is firm and solid; its tenacity may even be augmented. On the other hand, senile bone is distinguished by an entirely different feature, namely, atrophy. Its original volume may or may not be preserved, but its trabeculæ have thinned or disappeared; its lacunæ now resemble geods, as Cruveilhier remarked; its diaphysis becomes more like a mere shell; it is more frangible. The combination of these two conditions constitutes what some authors have called *osteoporosis adiposa*. That these are not two manifestations of the same cause is proved by the fact that in old persons the sternum and ribs are rarefied and fragile while their marrow substance is yet red. That which goes by the name of *senile osteomalacia* seems to be, in effect, this same condition of affairs; for the marrow of the trunkal skeleton is brownish, not yet yellow, incompletely fatty, and the bones have undergone more or less rarefying atrophy.

So with bone in immobilized limbs; its condition is similar; it passes into two conditions of adiposity and rarefaction; it is, to all intents and purposes, senile bone, but it has aged rapidly; its weeks

have been its years. "From the moment of its immobilization it has begun to atrophy and rarefy; its spaces to enlarge by absorption of lamellæ, and its osseous tissue to be replaced by fat" (Cruveilhier).

On studying this deposition of fat it is found to be due to a diminished nutrition. The fatty bone preserves its investments intact, but within these its Haversian canals, its medullary canal, and its finer spaces fill up with vesicles of fatty material, and its blood vessels are proportionally diminished in size; a process which may be unduly hastened by alcoholism, obesity, and by immobilization from any cause whatever. One is therefore forced to conclude that the whole process indicates a diminished vitality; but only diminished, not destroyed, for it is equally plain that fractures of bone thus affected heal well and consolidate perfectly. So, too, of the fatty surroundings often noted about a tuberculous focus. Ollier has found that after *évidement* or resection they take a proper share in the reparative process.

And now, is fatty (yellow) bone a favorable site for the development of tuberculous processes? On this matter exact statistics are needed before it can be fully and exactly stated. Nevertheless, as "red" bone seems too highly vascular soil for tubercles to grow on, so "yellow" bone seems on the other hand too slightly vascular, and consequently does not afford a soil any better conditioned.

This statement is borne out by the following facts: In young subjects it is not rare to see tuberculosis arise in the center of an epiphysis, and but slowly invade the articulation. This is not the case in adults; among grown-up individuals it is more often the tendinous or articular synovialis which is first attacked, and the fatty epiphysis is slow to succumb, so that often only a thin layer has to be removed in resecting. This is true, also, of smaller joints; in the carpus or tarsus the tubercular process diffuses more across and along the synovial membranes than by way of the bone—in adults.

Apropos to this indifference of yellow bone to tubercle, we take the following from Nélaton's work (1848): "The spongy tissue of bone, in adults, presents two very different varieties, which may be designated as 'adipose' and 'vascular' or 'red.' The extremities of long bones and the short bones of the extremities are consti-

tuted of the first, while the bones of the trunk are composed of the second. It is in this secondary variety of bony tissue, in adults, that tubercular products almost exclusively develop. In young children these differences do not exist to any marked extent, the bones of the limbs, like those of the trunk, being formed of the red variety, and tuberculosis attacks either indiscriminately. But in the adult it most often is noted in the trunk. To this law there are few exceptions, and the explanation of these is found in a tardy transformation of one variety into the other."

III. White or Consumptive Bone.—White bone is, *par excellence*, favorable to tuberculosis. The skeletons of phthisical subjects have always been the favorite with those who make a business of preparing them, on account of their whiteness and fineness of grain, and their minimum content of blood and fat. They have comparatively small vessels, and are of the atrophic type, albeit not the rarefying atrophy of old age with preservation of external volume, but meaning thereby, that they are reduced in size and volume, having the characteristic markings less developed; they are the bones of youth even in adult age; the Haversian canals are narrow, and the osteoblasts are small.

Take for example a humerus of the same length; it would weigh:

In a very muscular subject, ...	240 grammes.
In a moderately " "	218 "
In a consumptive "	167 "

But take an exactly equal *volume* of bone from each, and the phthisical (white) bone will astonish by its weight; it is more dense, it is *all* bone, compact, even ivory-like. Those who have opened many phthisical chests in making autopsies know with what difficulty the ribs are cut.

Is this then a distinctive or special type of atrophy,—and if so, just where shall it be placed? Ollier has described a form of growth of bone which he calls *atrophic elongation;* and his student, Mondan, in a remarkable thesis on "Atrophies" (Lyon, 1883), has completely studied it. Let us suppose an adolescent subject with a lesion of his femur which arrests its proper development by stiffening his limb(—disuse); it now happens that the tibia of the same side instead of growing less, rapidly grows longer, as if in compensa-

tion; it becomes longer, but more slender. Ollier explains this as a functional inertia, or, more strictly, as a growth from lack of due pressure from weight of the body. The osteoplastic process goes on with less restraint from pressure than in the other leg. Thus are explained those rapid growths which are noticed in acute cases where patients are confined to bed.

This matter of atrophic elongation has been disputed, but Ollier has placed it beyond doubt, by both clinical and experimental studies.

This peculiarity gains a certain importance, also, from a speculative point of view,—*i. e.*, the laws of growth and development. The total growth of an organism is composed of growth in a vertical direction (length), and growth transversely (breadth, thickness), and these have not exactly the same origin; the former is mostly cartilaginous, the latter periosteal. These do not necessarily harmonize with each other toward the perfect type. Thus, growth in infancy is mostly transverse; in adolescence it is vertical even to excess, and finally returns to the infantile type. But in the adult it is not rare to see that one or the other seems to have predominated. Taking now the incontestably vertical type, the adolescent, and regarding the slender bones developed in length at the expense of thickness, *we must ascribe this method of increase to atrophic elongation.*

So in the case of the phthisical subject, or him with the scrofulous diathesis; the neck, the long sides and hands, the chest reduced in its transverse diameters, the sharp xiphoidean angle, the small waist, flabby muscles, insufficient for prolonged effort, and the constricted size of the arteries nourishing all these parts—all these show the atrophic lengthening.

These physical signs permit only the following interpretation: We may regard bone as a definite quantity in the life of the individual, and, if we wish to carry this idea even farther, the blood as the dispenser of subsistence. According to the manner in which the blood is allowed to perform this function, will the system be well or ill-proportioned as between extremes of these two types. Hereditary influences aside, the youth becomes tall, because his transverse growth is feeble, and this is feeble because periosteal activity is in accord with muscular activity. But youth on whom is imposed more

muscular exercise become large and strong, with muscles thicker than they otherwise would be, though this is at the expense of their vertical growth. At the time when the youth becomes an adult, cartilaginous growth slackens, and periosteal growth assumes the lead, stimulated thereto partially by muscular activity, and the bone is more thoroughly vascularized. The muscular *in*activity of tall patients, and those of phthisical habit, cannot do otherwise than relax periosteal activity. The same holds good with regard to the growth of stumps and immobilized limbs.

Hence, it may happen that mere pressure, or lack of pressure, do not exercise so great an influence as has been ascribed to them by Ollier.

And now having a definite idea of this atrophic type of growth of bone, we may once more ask: Is such atrophic bone favorable for the deposition of tubercle? And the answer is: The microbe of tubercle is there perfectly at home, not so much as a parasite, but as a proprietor of the soil. It is on ground which generations of its predecessors (in the patient's ancestors) have prepared for it, either directly or by circulatory inactivity, and handed down by heredity.

It is poor soil, badly fertilized, insufficiently irrigated and drained, but is *home* for the bacillus tuberculosis. Most tuberculosis of bone occurs in such locality as has been just described; it is here that it locates itself so easily, so tenaciously, so persistently; and it is in such cases that the danger of generalized infection hangs over the patient's life as a constant menace. The whole bony skeleton is in an equally favorable condition of receptivity; the accidents of exhaustion, cold, trauma, articular or tendinous fatigue, circulatory disturbance during growth, etc., determine the exact spot where outbreak shall occur.

In spite of the gravity of these bony lesions, which we may paradoxically term tuberculosis of the tuberculous, they are fortunately not entirely beyond our resources. If the prognosis for the physician is always grave, it is a consolation which the surgeon should duly appreciate and that he alone possesses, that he is very often able to seek out this hidden enemy, contest with him his chosen ground, and conquer him there.

A NOVEL OPERATION.

A BERLIN journal gives an account of an operation performed recently by Prof. Bergmann, of that city. Two cases presented themselves simultaneously to the professor's surgical clinic, one a necrosis of the humerus and the other an amputation of the femur. The necrosis of the humerus called for an extensive removal of dead bone-tissue, which Bergmann supplanted by a large piece from the amputated femoral bone. Perfect success attended this unique surgical procedure.

Book Reviews.

A HANDBOOK OF PATHOLOGICAL ANATOMY AND HISTOLOGY. By Francis Delafield, M. D., and T. Mitchell Prudden, M. D. 8vo., pp. 575. New York: Wm. Wood & Co. 1885.

This is an enlargement and making-over of Dr. Delafield's earlier work on post-mortem examinations, and is a most welcome addition to our list of distinctively American text-books. To be sure much of the subject-matter is common professional property, but the illustrations, of which there are one hundred and forty-six, were all made especially for this work, from drawings by the authors of their own specimens. This fact alone gives it a charm which would go far toward atoning for any shortcomings. It is so tiresome to pick up certain well known works and recognize wood-cuts which have done duty for a dozen authors; it is enough to cause one to lay them down with the thought that if the illustrations are not new, the subject-matter is probably also old.

We have given this new handbook of pathology a careful examination, and find in it very much to commend and very little to criticise; so much that is admirable, in fact, that we cannot do it justice in a short book-notice. One misses some of the stereotyped chapter headings, but he finds the information he desires in its suitable place. Toward the end of the work the arrangement might be improved. But the work is thoroughly abreast of the times; bacterial pathology is given its just dues, without making it too large a bolus for some of our older practitioners to swallow. Altogether it is an excellent work, and may be safely commended to students,

who ought, each one, to possess this or some equally reliable text-book on the subject; while a better one it would be hard to find.

Von Ziemssen's Handbook of General Therapeutics. In seven volumes. New York: Wm. Wood & Co. 1885. Vols. I., II., III.

This Cyclopædia of Therapeutics, of which three volumes lie on our table, is another monument of German study and industry, and is the work of the same celebrated editor whose connection with the Cyclopædia of Practical Medicine has made him as famous in this country, as he was previously in his own. Vol. I. contains an Introduction by the Editor, and monographs by Prof. Bauer and Dr. Stange, and naturally is mainly devoted to the "Dietary of the Sick," and dietetic methods of treatment. It discusses these subjects thoroughly, and, while in no very important sense original, places before the reader in an admirably condensed form the substantial values of varied nutrition. These show the importance of so combining the food supply that the albuminates, fats and hydrocarbons shall be in proper relative amount to meet the requirements of the vital forces. Numerous tables record experiments with various articles of food, including tests of Koumiss upon a large scale, and the work may be said to fairly exemplify the present state of our knowledge upon these important matters. To quote with anything like justice from its pages would require more space than can be spared.

Vol. II. is made up of papers by Liebermeister, Jürgensen and Eulenberg, and discusses the principal methods for reducing fever. First in importance from the German standpoint is the influence of cold externally by means of baths, affusion, cold packs, ice, etc. As this form of treatment is employed it has not met with special favor from American physicians, though the clinical reports of Continental physicians give favorable impressions of its value. In private practice Prof. von Liebermeister performs the cold pack, but in hospitals recommends the bath. Next in importance is quinine in doses of 20 to 45 grains administered preferably at 7 or 8 o'clock, P. M., and from these doses a reduction of 4° to 4.5° F. is usually to be expected. These large doses may be given in water acidulated with acid sulphuric, or in wafers of about 10 grains each; but the

full dose must, if possible, be given within half an hour, or at longest within two hours. Next in value is salicylic acid in combination with soda—of this, salicylate of sodium, 60 to 90 grains is the suitable dose. This may also be given with digitalis, though objections are made to the combination. In a note by the translator, Dr. Matthew Hay, the merit of antipyrine is conceded.

Prof. Jürgensen discusses blood-letting as an antiphlogistic procedure, in the main condemning it. Further, he considers transfusion with mingled favor and distrust. Prof. Eulenberg in the remaining 120 pages of the volume elaborately presents the treatment of disease by the epidermic, endermic and hypodermic administration of medicines.

Vol. III. is devoted entirely to respiratory therapeutics, and is from the pen of Prof. Oertel.

To the majority of American physicians the treatment of diseases of the respiratory organs by direct local applications will have the charm of novelty, not only from the variety and ingenuity of the apparatus employed, but also the wide range of remedies utilized and suggested, for it is a therapeutic proceeding barely hinted at in works upon pulmonary diseases. But here is a volume of 800 pages devoted exclusively to their treatment by direct applications in the form of gases, vapor, or pulverized inhalations.

In this brief notice it is quite impossible to mention the names of the distinguished physicians from whose researches, experience and ingenuity the treatment has been placed upon the present practical basis.

Of a work so extended and elaborate it is impracticable to give any just conception by excerpts. It should be read by every practitioner. No less than twelve ingenious forms of apparatus are illustrated by engravings. Minute directions are given for various medicated solutions to be locally applied or diffused in apartments. The results reported by Prof. Oertel are extremely interesting and encouraging. Not less, perhaps, in importance is the "pneumatic treatment," by compressed and rarefied air. Many forms of apparatus are figured and described, and clinical reports given of remarkable results. These include applications of compressed air by tubes directly to the lungs, and also the condensation of air in

apartments suitably constructed so that external and internal pressure may be equalized. Provision is made for suitable inlet and exit so that the air remains chemically pure. In atelectatic conditions due to compression and infiltration, and emphysematous inflation with decrease of vital capacity, there is no doubt, says Oertel, that increase of inspiratory and expiratory force will be obtained. The air thus used may be medicated in any desired way. The effects are said not to be confined to the lungs, but important tissue changes occur.

It will be remembered by some who read these lines that an elaborate and expensive Pneumatic Cure was erected by the late George W. Tifft, upon Seneca street, near Hamburg street, quite twenty years ago. For want of the experience now attained, or lack of skill on the part of the physician in charge, it soon fell into disuse and was long since abandoned. But in all the principal Continental cities such establishments are reported as giving excellent results.

The careful student of therapeutics will find this work invaluable, and the American profession is to be congratuated on having it made so accessible, while the publishers deserve thanks for the elegant manner in which they are issuing it.

A Text-book of Practical Medicine, Designed for the use of Students and Practitioners of Medicine. By Alfred L. Loomis, M. D., LL. D., Professor of Pathology and Practical Medicine in the Medical Department of the University of the City of New York. 8vo., pp. 1102; 211 illustrations; 3d edition. New York: Wm. Wood & Co. 1884.

In the preface to the first edition the author announces that "The work, both in text and illustration, is practically a revision and an elaboration of lectures given during the last eighteen years." The prosy, reiterating style of the class-room is gone and the lecture form nowhere apparent: the subject-matter is elaborated into a treatise of the modern type. It has already won the approval and commendation of the profession, as evinced by a substantial testimonial; only five months after the publication of the book the author was notified that a third edition was to be issued.

The classification is arranged in accordance with the accepted views of ætiology, and is somewhat different from that generally

adopted in works on practice. Pneumonia is classed under "Diseases of the Respiratory Organs." The writer, after discussing in a clear way the causation and history of the disease in reference to its true nature, inclines to the belief that it is a specific constitutional disease.

Diphtheria is considered with "Acute Miasmatic Affections," and its differentiation from croupous laryngitis explained.

Debatable theories of causation are tersely given in the dual manner sometimes coupled with comment, often and wisely with none.

On page 187 he makes the questionable statement, that "the question of the communicability of phthisis—either by personal contact, inoculation, or the ingestion of tuberculous matter, is one to which clinical observation has as yet given no conclusive answer, and experimental observations upon man are wanting save in a single questionable case." Again, on p. 175: "The ætiological relation of this bacillus (Koch's) to phthisis still rests solely upon Koch's demonstration."

The chapters on morbid anatomy call for high praise: those devoted to diseases of the lungs are especially good. The accompanying illustrations are original and well executed.

Doubtless had not space been limited and condensation necessary, the author would not have omitted to mention the characteristic micrococcus of pneumonia described by Klebs and observed by Eberth, Friedländer and others as a part of the morbid anatomy of that disease.

The statement that concentric cardiac hypertrophy is rare, and that the author "has never seen any example of this form of hypertrophy," would have been surprising before the time of Cruveilhier, but not so now, when the fact of its occurrence is involved in so much doubt that Paul, in his recent treatise, describes the diminution of the heart cavity as "apparent." The "so-called" disease will linger in medical literature until some stronger proof of its non-existence than stretching the cardiac fibre until the cavity assumes a normal size is applied.

We take pleasure in referring Dr. Loomis to Homem's case of tricuspid stenosis, cited from the *Revista dos Cursos Praticos e Theoricos do Rio de Janiero*, vol. 1., No. 1 (see *Medical Record* of Sept. 12, '85, p. 292), believing that it may be of importance as

bearing upon the statement, p. 402, "Tricuspid stenosis never occurs unless there is extensive mitral obstruction."

The traditional and sometimes instructive chapter on fevers will be looked for in vain.

Diagnosis and differential diagnosis receive careful and extended attention. Signs and symptoms are selected in a skillful manner and systematically grouped. The writer's ability as a reasoning diagnostician is manifest, and these portions of the book merit study rather than mere perusal. With a few exceptions, the salient points in diagnosis are fully given. We notice one or two instances where consideration and explanation should be more complete and finished. The instructions for recognizing fibroid phthisis might be more detailed and lucid. Only one half page is devoted to syphilitic disease of the lung—certainly not an unimportant nor liberally understood disease. The aids to diagnosis are cited and dismissed in the following two lines: "*The symptoms are either the physical signs of a tumor or of interstitial pneumonia. The diagnosis is reached by exclusion.*" The differential diagnosis between pyæmia and septicænia is aptly described on p. 698.

Dr. Loomis refers to the pleural crepitant râle as a physical sign present in the first stages of lobar pneumonia, evidently accepting the opinion that its cause is pleuritic, not pulmonic. By mentioning two kinds of crepitant râle without always prefixing the explanatory adjective, some confusion as to his direct meaning is caused—(pp. 89–90). The use of the word "panting," as descriptive of the breathing in pneumonia, is a happy one. The remark that "nine-tenths of all deaths after the sixty-fifth year are caused by lobar pneumonia" (p. 76), will call for more reflection before it is found to accord with the reader's experience.

In an admirable and judicious article on typhoid fever, attention is attracted to certain views which are of interest in light of the author's wide experience and conceded skill as an observer. On p. 629 the statement occurs: "I would not say that it is possible for typhoid fever to occur without the eruption, neither would I affirm that scarlet fever ever exists without the characteristic rash of the disease; but as regards these respective fevers, if no eruption was present I would make the diagnosis with equal hesitancy in the one

as in the other." Ulcerative endocarditis is not named as a disease from which typhoid is to be differentiated in its stage of inception. The cautious directions for use of the cold bath and affusion, and especially the warning against its indiscriminate employment during the second and third week of the disease, can be read as wise counsel. Dr. Loomis vacates the position that the development of the disease can be arrested (p. 639).

As a therapeutist the author seems to exercise a safe skepticism, yet instances occur where his radical faith will not win a general following. Dietetic and hygienic rules constitute a large factor of his treatment. Some readers will murmur at the limited array of drugs advised,—perhaps justly. The young practitioner, who, after repeated trials and failures, searches this treatise in the hope of selecting a last resort, will be disappointed. The range of drugs is probably restricted by a calm judgment—after a diligent and prolonged inquiry into their efficacy. New remedies are rarely mentioned, but the reliable ones employed are urged by a strong belief in their potency. Quinine, opium and alcohol are the drugs of his faith in acute disease with temperature. We are glad to note that quinine is not regarded as an unfailing antipyretic. Pneumonia is treated as a specific fever with local manifestations. "Veratrum viride, aconite, antimony, calomel, iod. of pot. and all so-called 'cardiac sedatives' have been discarded, for it is evident that they add a new load to an already overburdened heart. They may for a time lower temperature and pulse-rate, but this will be accomplished at the expense of heart power." Dr. Loomis advises that the patient be brought under the full influence of opium by administering morphine hypodermically for the first four days(?). Such treatment is based upon the "clinical fact" that "the nervous shock which attends the onset of acute lobar pneumonia is greater than in any other acute disease, except, perhaps, acute peritonitis." We regret that the author does not furnish substantial statistical results in support of this procedure, which is clinically new to us. There are strong reasons why such treatment could be adversely criticised, and we think that it will be accepted reservedly. Alcohol is considered superior to carbonate of ammonia as a cardiac stimulant. It is believed that the important indication in the treatment of phthisis is to control the temperature elevation and prevent the wasting effects of tissue change, etc. Quiniæ sulph. is recommended as the most reliable drug, in 20 gr. doses on alternate mornings. "Its administration

should be continued until cinchonism is produced or until the temperature falls." "I am confident that no drug has equal power in arresting phthisical processes during the early stages."

The questions, "Can morphine in full doses be administered to patients with acute uræmia?" and "What are the effects of such administration?" are answered in the affirmative, and the author adds: "The almost uniform effect of morphine so administered is, first, to arrest muscular spasm; secondly, to establish profuse diaphoresis; thirdly, to facilitate the action of cathartics and diuretics, especially the diuretic action of digitalis" (pp. 542–543). A remonstrance against the use of hydragogue cathartics and diuretics in pleurisy with effusion (p. 156) is well supported by cogent objections. The consideration of the treatment of rheumatics is about as unsatisfactory as one might expect.

More detailed advice in treatment could hardly be expected in so small a treatise, covering such a wide range of subjects, but it could be made more valuable to the student by such an addition.

The matter is well digested and rearranged and the compilations well selected. The style is concise and direct. The English is plain, never difficult to understand, but the word-grouping might be smoother in places. Happily, the strongest word of criticism conveys warm praise. The book can be improved and rendered more useful by further elaboration and augmentation. Certain chapters can be made more finished and complete. Seldom does the reader wish a new medical work were larger. As a text-book, it ranks with the best work on practice, and we heartily recommend it as a satisfactory, first-class, modern treatise on practical medicine. J. H. P.

WOOD'S LIBRARY FOR 1885.

The enterprising firm of Wm. Wood & Co. have continued through the year the publication of a monthly volume belonging to the series now so widely and favorably known under the above title. Several of these are reprints of English works, better known by title, to most physicians, than by substance. Of these, *Holden's Osteology*, which has always been an admirable guide, is reproduced with sixty-eight plates and eighty-nine wood-cuts. *Eustace Smith* on the *Wasting Diseases of Children* is reprinted from the fourth English edition; it is a work which stands alone, and is a most important one for the general practitioner.

Kirkes' Physiology in its latest dress, brought up to the most recent physiological discoveries, edited by Baker and Harris, should be a most welcome addition. It serves a double purpose as text-book and work of reference, and should be read as diligently as any work on practice. We are pleased to find that the two volumes in which it appears in the Library are bound in one and sold separately for the benefit of students.

Dickinson's admirable work on *Renal and Urinary Affections*, the latest publication of this well known author on a subject in which he is considered an authority, is a book of most sterling merit, and deserves the most careful perusal. It has been carefully arranged so as not to be a repetition of his work on Albuminuria, which was published in the series for 1881.

Those who desire a comprehensive treatise on toxicology will find it in the two volumes of *Poisons, their Effects and Detection*, by *Alex. W. Blyth*, which are alike a manual for the expert and an encyclopædia for the student.

Of the volumes which have thus far appeared, the only one by an American author is that by *Wendt* on *Asiatic Cholera.* The publishers were quick to estimate the interest which the apprehended approach of the cholera scourge would attach to recent and authoritative utterances, and selected Dr. Wendt to treat of the matter in its latest phases. This he has done fully, and in most respects satisfactorily, and the result is a most important addition to the series.

As a whole, this series is no less valuable than those which preceded, and its wide sale shows its appreciation by the profession.

BOOKS RECEIVED.

Human Osteology: HOLDEN.
Handbook of Physiology: KIRKES.
Wasting Diseases of Children: SMITH.
Effects and Detection of Poisons: BLYTH.
Renal and Urinary Affections: DICKINSON.
Asiatic Cholera: WENDT.
A Practical Treatise on Massage: GRAHAM.
A Treatise on Diseases of the Ear: ROOSA.
Ziemssen's Handbook of General Therapeutics: Vols. I., II., III.
Diseases of the Ovaries: TAIT.
PARKES' Hygiene, with American Supplement.
Practical Medicine: LOOMIS.
Pathological Anatomy and Histology: DELAFIELD and PRUDDEN.

All these from Wm. Wood & Co., N. Y.: J. H. Matteson, 18 W. Eagle St., Agent.

MISCELLANEOUS ITEMS.

Dr. Charles Stout recommends the following combinations of iodoform for the purpose of making it odorless:

Pulv., No. 1.

℞ Iodoform, parts 9;
Coumarin, part 1. M.

Pulv., No. 2.

℞ Iodoform, parts 9;
Vanillin, part 1. M.

Pulv., No. 3.

℞ Idoform, parts 9;
Acid. cinnamic, parts 2. M.

For Ointments.

No. 1.

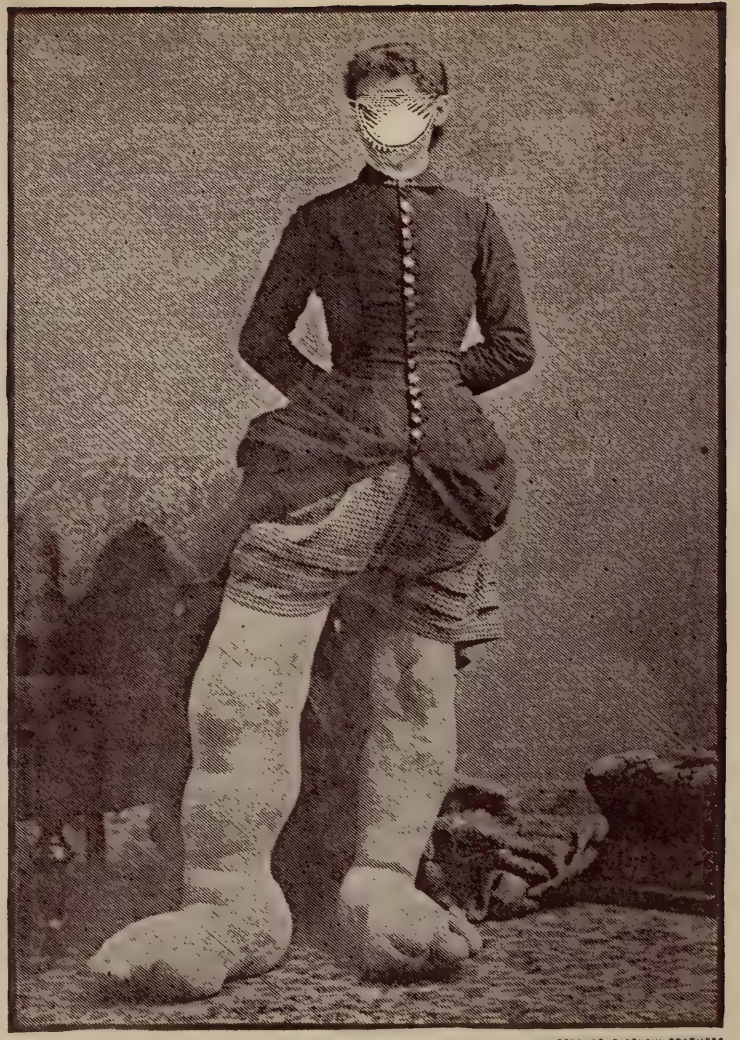
℞ Pulv., Nos. 1, 2, or 3, parts 60;
Ung. petroli, parts 420. M.

For Pills.

℞ Idoform, ℥i;
Vanillin,
Coumarin, āā gr. v;
Glycerin, gtt. v;
Bals. Peru, q. s.
M. et fiat mas. et div. in pil. No. xxx, silver-coated.

—*Therapeutic Gazette.*

On the Structure of Gall Stones.—Ebstein has demonstrated the required presence of an organic binding-substance besides the bile crystalline element. This putty-like matter is excreted by the gall-bladder or its channels, and forms a fibrous stroma around the crystalline structure. Therapeutically the knowledge of the existence and origin of this putty-substance is of importance, as it teaches the impossibility of gall-stones being formed without an affection of the gall-bladder or its duct. Hence the therapeutic action of remedies can be explained by their healing power over the local gall-bladder or duct affection, and by the thus-resulting abstracting of a constituent requisite for the growth of the stones. Turpentine and the alkali-sulphurous springs are, in fact, very effective anti-catarrhal remedies.—*Centralblatt f. kl. Med.*, No. 17, 1885.



PRESS OF BIGELOW BROTHERS

GIANT GROWTH OF THE EXTREMITIES. (PAGE 70.)

The Medical Press
of Western New York.

Vol. I. DECEMBER, 1885. No. 2.

INTESTINAL OBSTRUCTION.

By Thos. F. Rochester, M. D.
Professor of Theory and Practice, Med. Dept., Univ. of Buffalo.

Now that laparotomy, is so much, and often so successfully, employed to unravel and to overcome many of the occult mysteries of abdominal disease, it is thought by many persons, that excluding cancerous affections, and not even all of those, there are but few disorders causing obstruction, that may not yield to visceral surgery; that this opinion should not go too far is the object of this paper, and three cases will be cited in evidence:

Case 1.—In 1870, I was invited by Dr. Potter, of Lancaster, in this county, to visit Mrs. H., a portly female of fifty years of age, and the mother of several children. The history given was that her health had been failing for about three months; that she had been subject to colicky pains and constipation, but had not been confined to her bed for more than a week. She had but little appetite, but had not vomited; the urinary secretion was normal. On examination the abdomen was found enormously distended and was very tight, tympanitic and resonant. With a little care the outlines of the convolutions of the small intestines could be easily recognized. There was not tenderness enough for peritonitis, nor did the pulse or temperature indicate it; in fact, the temperature was rather lower than usual and the pulse was feeble and enumerated from 80 to 90 per minute. There was not the vomiting connected

with intussusception, nor the straining or bloody or mucous stools of colitis. Cathartics and injections had been fairly tried, although it was found that very little of the latter were retained—hot fomentations to the abdomen had been almost constantly employed. I advised opium in full doses, on the hypothesis that spasm was the chief element in the obstruction. This was faithfully tried. Mrs. H. died one week after my visit. A *post-mortem* examination was made by Dr. Potter, which I was unable to attend. He found the small intestines very greatly distended, larger than the ordinary colon, red and injected, but not ulcerated or obstructed. The colon was contracted throughout its entire extent, not being more than an inch in diameter at its head, and gradually diminished until it reached the rectum. In its transverse and descending portions it would scarcely admit an ordinary female catheter. The muscular coat was strongly contracted, the mucous membrane appeared thickened, but there was no sign of active inflammation. The liver was considerably enlarged; all the other organs healthy. It is possible that the condition of the liver and the colon may have stood in the relation of cause and effect, as hæmorrhoids and dysentery are generally believed to have intimate association with hepatic engorgement. But such a sequence must be a very unusual one.

CASE 2.—This case was reported to the Buffalo Medical Association in September, 1877, and published in the *Buffalo Medical and Surgical Journal* of the same month, in full. Only an abstract will now be given. A lady of thirty-eight years of age, and the mother of four children, and who had also been subject to many miscarriages, sent for me August 20, 1877, at 7 A. M. She had been my patient for many years and had frequently been a sufferer from attacks of colic, which readily yielded to treatment. Previous to this visit, I had last seen her in October, 1876, she having meanwhile been under homeopathic treatment. I found her with greatly distended abdomen, through the thin walls of which the convolutions of the small intestines could be distinctly felt. Her pulse was small and thready and so frequent that it could not be counted; extremities cold, nails livid, forehead hot, temperature, in axilla, 105; unconscious of my presence; evidently in great agony, constantly

crying for chloroform, of which her husband had administered, by inhalation, twelve ounces through the preceding night. With the symptoms above enumerated, it was but too evident that a fatal issue was near. I, therefore, especially under existing circumstances, refrained from administering morphine subcutaneously, and directed a suppository of morphine and extract of belladonna, each three-fourths of a grain, to be repeated if required It was repeated at 11 A. M. At 3 P. M. she was quiet but unconscious. At 9 P. M. she died. Forty hours after death, *post-mortem* examination was made by Drs. Diehl and W. W. Miner, in the presence of myself and several other physicians. On opening the abdomen the small intestines were found enormously distended and injected throughout their entire length, the average diameter being three inches. The large intestine was correspondingly shrunken, being but half an inch in diameter, but apparently not thickened or diseased; there was no obstruction whatever in the large intestine. Evidences of considerable peritonitis were found in the presence of lymph, adhesions and serous effusion. Attention was called by Dr. Fowler to what appeared to be a perforating ulcer of the ileum. On close examination it proved to be a slough of the outer and muscular coats, not involving the lining mucous membrane. About two feet below this point the ileum *came to an abrupt end, there was a tight* cul-de-sac, *the intestine was completely closed*, and on being distended with a blow-pipe, displayed a rounded extremity with cicatricial lines. Search being made for the continuation of the intestine, another *cul-de-sac* was found, separated from the first about four inches and connected with it by mesenteric attachment. It was also distended with a blow-pipe, and corresponded with the first *cul-de-sac*, in manner of occlusion, but was only one-fourth the size of the first in diameter. This portion of the ileum was eight inches in length, and terminated naturally in the head of the colon. The specimen has been carefully prepared by Dr. Phelps, and is presented for examination. It is evident that the ileum has been *separated by a space of at least four inches;* that there is no continuity of intestinal cavity corresponding with this interval, and that each end of the separated intestine is completely closed by continuous peri-

toneal membrane, the rounded ends showing distinct cicatricial lines. Careful search in the abdominal cavity did not reveal any foreign body or any loose intestine. There was present, however, a muddy fluid and shreddy flocculi in abundance, and this may have been the remains of the disintegrated intestine which left the wide gap. The specimen is presented as unique and most interesting. There is plenty of room for conjecture. There is no positive evidence of the real cause of the solution of continuity. It may have proceeded from a recent strangulated internal and concealed hernia or from an intussusception. As far as I have been able to ascertain, the patient did not have a thorough evacuation of the bowels for the five weeks preceding her death. For the last ten days she did not retain any nourishment. Vomiting was constant and persistent. Another singular circumstance remains to be mentioned. Two weeks before her death Mrs. E. seemed better, sat up in her room, and took a ride in a carriage with her husband, but while out was attacked with terrific pain, was immediately brought home, and did not thereafter leave her bed. This case was presented to the American Medical Association, at its meeting in Buffalo in 1878, and is published in its Proceedings for that year, with an excellent wood-cut illustration. No one present had met with a similar lesion in his observations.

CASE 3.—Mrs. J. S., widow, 68 years of age, sent for me February 8, 1884. She complained of constipation, and said there seemed to be an entire cessation of action in her abdomen. No pains, no gurgling, no uneasy sensation, simply stagnation, bowels moving very slightly about once a week. This condition had existed for a month or more. Her bowels had formerly acted daily. She was thin, rather delicate, but had led a very active life, spending much of her time out of doors. Her appetite was fair, digestion good, was never nauseated; pulse and temperature normal. I prescribed comp. rhubarb pills, not detecting any serious difficulty. In four days was again summoned, two pills daily and several enemata having had no effect. Made careful examination of abdomen and digital exploration of the rectum. Could not detect any obstruction. Prescribed pil. cath. comp., two every six hours. Of these she took six; no effect except slight nausea. Ordered and superin-

tended the administration of a purgative enema with fountain syringe and long rectum tube, which was passed up for two feet. Not more than a pint could be retained on repeated trials. From this it was judged that the obstruction was in the transverse colon. It is not necessary to give further details. She was frequently seen by Dr. Burwell and Dr. Roswell Park in consultation, and various measures were tried, including electro-galvanism, both constant and interrupted current. On the 27th of March she was seized with excruciating abdominal pain, followed by enormous swelling; pulse became very feeble, and she soon lapsed into a comatose state. She died on the 29th. Two weeks before, the question of laparotomy had been considered; but on account of her advanced age and feeble condition it was thought best not to operate, and I think, from the revelations of the *post-mortem*, it would have done no good. This was made by Dr. Fred. Peterson, then city *post-mortem* examiner and lecturer on pathology in the medical department of the University of Buffalo, now first assistant physician in the Hudson River State Hospital. Appended is his report.

AUTOPSY, MARCH 30, 1884.—Dead twenty-four hours. Body well nourished and well formed. Permission given to examine the abdomen alone.

There were fæces and intestinal gases in the peritoneal cavity. There was no peritonitis. The fæces came from a small perforation in the lower part of the ascending colon. The cæcum and ascending colon were enormously dilated, making a sacculation which hung far down into the pelvis. This sac contained some eight litres of soft green fæces; its mucous membrane was injected in parts and there were a few catarrhal ulcers; its walls were everywhere exceedingly thin. The weight of this mass being quite great, the transverse colon was dragged down by it in such a manner that the gastro-colic omentum was made very tense at its right border, thus constricting the colon at that point. This traction having continued, no doubt, some months, the stretched omentum had become thickened also at this spot through compensatory hypotophy, and had thus added to the difficulty of evacuation of the sac. However, upon cutting through the colon at this point, there was found no stenosis of its lumen. The diameter seemed at every place no less than normal, nor were any inflammatory changes discovered in the peritoneum, omentum or mucous membrane, with the exception of the few spots in the dilated portion just described.

Diagnosis: These changes are, in my opinion, wholly due to gradual loss of peristaltic action in the intestine—to chronic constipation. This state having existed for months, as shown by the history of the case, it gradually led to dilatation of the cæcum and colon ascendeus, the place where the law of gravity exercised

most markedly its influence. As time went on, the dilatation increased, the bowels moving occasionally, because during recumbence the fæces had some opportunity to pass around the colon. Finally, however, the weight of the ingesta became so great that hanging as the mass did into the pelvis, the fæces could not even in recumbence pass the colon at the gastro-colic omental tension-point by the mere force of gravity. Had peristalsis kept up, this point would have offered no interference with the fæcal current. For a month *ante-mortem* (as I understand) there was no movement of the bowels. The dilatation went on, and finally inflammation taking place in the sac, with the formation of catarrhal ulcers, perforation occurred, followed by collapse and death.

A CASE OF TOTAL EXTIRPATION OF THE LARYNX. *

By Roswell Park, M. D.

Prof. of Surgery, Med. Dept., Univ. of Buffalo; Attending Surgeon to the Buffalo General Hospital.

Gentlemen: The case I have to show you here is one of such interest that, while but very few of you had the opportunity of witnessing the operation, I cannot forego the chance of showing you its results so kindly permitted me by the patient, who is himself a physician and who was until very recently in active practice in an adjoining state.

But that you may better understand his condition previous to operation I have begged my friend, Dr. F. W. Hinkel, under whose care he had been, to give you a short account of the case as he had watched it. This he courteously furnishes as follows:

"Dr. J. H. Pierce was brought to my office for examination October 9, 1884, by Dr. H. R. Hopkins. His voice was shrill, discordant, and very stridulous. He gave his age as sixty-three years. He had the appearance of rugged health, but stated that while a youth he had been "sent away to die of phthisis." After his graduation in medicine he developed perfect general health, which he had since retained, in spite of much abuse in civil and military life, and by excessive smoking. Said he had used as many as twenty cigars a day. He dated his throat trouble from an attack of acute laryngitis after great exposure in the early years of our civil war. Since then, has been annoyed by occasional attacks of hoarseness and sore throat, which gradually became more frequent, continuous and severe until,

* Part of a Clinical Lecture delivered at the General Hospital October 3, 1885.

in the last few months, his voice had fallen into its present condition. Lately there were occasional darting pains through the region of the larynx. He had a hacking cough—especially at night—with little expectoration and no pain. Occasionally he had attacks of dyspnœa, which he termed "asthmatic attacks." Otherwise his personal and family history were good. He had never had a laryngoscopic examination.

"The oro-pharynx was found unusually small in proportion to size of patient, much inflamed and extremely irritable. The arches of the palate were swollen and red. The uvula was of a purplish-red color, much thickened and covered with corrugated mucous membrane, but not œdematous nor elongated. The laryngoscopic examination was made with difficulty, owing to excessive faucial irritability. It revealed deep congestion and puffiness of the mucous membrane in the supra-glottic portion of the larynx. The ventricular bands were swollen, deep red in color, and not clearly defined. The location of the vocal bands was filled with two reddish-grey, irregular, sessile growths, apparently filling the ventricles on either side and covering both vocal bands. By careful examination they could be seen to extend on each side over the lateral walls of the sub-glottic portion of the larynx, so that the bulk of the growth was sub-glottic. The glottis was much and irregularly encroached upon. A tooth-like process from the posterior third of the right growth, and a similar process from the anterior portion of the left growth, transformed the chink into an irregular Z-shaped opening. The sub-glottic larynx was irregularly contracted in its lateral dimensions, rendering it impossible to see beyond the growths. The further encroachment upon this small breathing space by the swelling incident to acute congestion readily explains the 'asthma' from which he suffered at times. There was no ulceration present. The cushion of the epiglottis was swollen, but probing did not show marked tenderness over it or the growths. These latter I regarded as papillomata, but feared there was beginning epitheliomatous degeneration. Believing their complete removal *per orem* to be impossible, I made use of soothing alterative applications, and warned the patient of the great possibility of malignant degeneration at his age, and of the possible future advisability of thyrotomy or even extirpation of the larynx.

"After a few days he disappeared suddenly from my observation. He came under my care again for a few days on January 8, 1885. He had been under Dr. Elsberg's care, in New York, in the interim. The condition and appearance of his throat were much the same as when first examined. On April 20 I saw him again. He stated there had been some operative procedures by Dr. Elsberg. Owing to the unfortunate death of that eminent laryngologist it has been impossible to obtain, with any exactness, his prognosis or treatment of the case. An examination showed but little change in the growths, and that for the worse, the glottis being smaller and the growths more redundant. The patient was suffering at the time from a severe pharyngitis. The uvula was much inflamed, and dyspnœa was quite marked. Under treatment this disappeared, and the patient with it.

"I again saw him on June 10. In the interval he had visited Philadelphia and was there seen by Drs. Seiler, J. Solis Cohen, and others. His condition was now changed much for the worse. There were darting pains through larynx and into left ear. Voice was gone completely. His breathing was noisy, difficult and hurried. Pulse rapid and weak. Sleep was disturbed, and had often to be taken sitting up, on account of sudden attacks of dyspnœa. He was losing his strength and spirits. The left ventricular band presented, on its anterior third, a smooth, rounded tumor, of deep red color and considerable density, shading into the surrounding congested mucous membrane. The growths over the vocal bands had increased somewhat in size, but were not ulcerated. There was exquisite sensitiveness over the cushion of the epiglottis and over the new formation in the ventricular band, when probed. The case being now plainly one of epithelioma, I seriously broached to him thyrotomy, or extirpation of the larynx, as the only means of relief from the disease, and explained that tracheotomy might be rendered necessary by the slightest diminution of his air-space by inflammatory swelling. Some indiscretion on his part precipitated an acute congestion of his larynx, and on the morning of June 14 I found him in my office, laboring for breath, weak, excited and somewhat cyanosed, after a sleepless night spent in a struggle for life. Finding tracheotomy necessary at once, I hurried him home and called in Dr. Roswell Park, who met me that afternoon at the patient's temporary residence."

The patient was in the condition described by Dr. Hinkel, when I first saw him. As he was in danger of immediate suffocation there was no difference of opinion as to the immediate necessity for tracheotomy. This was consented to, and at once performed. So little breathing space was there that we even feared to give an anæsthetic; we therefore urged that it be borne without. A syringe full of cocoaine, four per cent. solution, was injected under the skin in the middle line of the neck, and the ether spray used as a local anæsthetic. With Dr. Hinkel's kind assistance I then began to operate. But pain was by no means abolished, and on this account the procedure was prolonged. Finally, after dissection was partly accomplished, and the deep parts so far exposed that, in case of necessity, the trachea could be roughly and quickly opened, the patient's demand for chloroform was acceded to, and it was carefully administered.

No small difficulty was experienced in properly exposing the trachea, and the operation was, hence, annoyingly prolonged. Even after its exposure the proper introduction of the tracheal tube was rendered very difficult; and the introduction of wire sutures through

skin edges and the margins of the tracheal opening, as I had contemplated, was impossible. Full anatomical explanation of these difficulties was furnished by the subsequent operation, which showed that the trachea not only lay at an unusual depth, but had undergone a considerable calcification (senile) by which it had lost most of its elasticity.

But the tracheal tube was finally introduced, and the patient breathed easier than he had for a long time. Relief was immediate, and in two days he was up and about his room and had recovered from the physical exhaustion of his partial apnœa.

During the latter part of the first week there was a mild amount of nocturnal delirium, which we were then inclined to ascribe to the influence of opiates, but which, in the light of subsequent developments, we had to consider traumatic in origin.

The tracheotomy wound granulated so rapidly that in the absence of sutures the tube could not be kept in place, but was crowded up and out by the healing process. But the more or less inflamed and tortured larynx, even though filled up with growth as it was, had had a week's rest, and after the removal of the tube he breathed with considerable ease.

Now the question of "what next?" assumed no small proportions. It was a choice between sure death from extension of the trouble, or not improbable death from the results of a radical operation. For the latter, spoke the excellent physical condition and powers of endurance of the patient, and the facts that no cancerous cachexia was to be noted, and that there was no sign of any involvement of parts outside the laryngeal box. Against it, spoke only the known dangers of the operation. Our advice was in favor of operation, and this was also the advice of Dr. Carl Seiler, of Philadelphia, who saw him while on a trip to the West. The patient made his choice of radical operation, after a full presentation of its advantages and dangers.

Accordingly, he took a private room in the Buffalo General Hospital, where he was prepared for operation. On June 28, 1885, complete extirpation of the larynx was performed. During it I had the valuable assistance of Dr. Phelps, who kindly took charge of the anæsthetic (chloroform with 1% of amyl nitrite), of Dr. Seiler

and Dr. Hinkel, who assisted in the operative procedures, and of several of my colleagues of the hospital staff. The operation was made, in the presence of a number of medical gentlemen of the city, in the hospital amphitheater, where there is remarkably good light.

It was necessary to make a long incision, in the middle line, which ran from a little in front of the body of the hyoid to one inch below the upper end of the sternum; this, as the head was drawn backwards over pillows, made it about six inches long. In it were included the remains of the previous tracheotomy incision. Careful dissection was then made down on either side of the larynx and trachea; the muscles attached to the sides of the larynx were peeled back with a sharp periosteum elevator. This separation of soft parts on either side was carried as high as the hyoid bone and as low as the second or third rings of the trachea. Vessels were caught in hæmostatic forceps fast as they bled, and tied later with catgut; a few larger veins were tied twice and cut between ligatures; about twenty-five hæmostatic forceps were employed, once or twice all being in use at the same time. Up to this time patient had breathed his chloroformized air by the mouth. At this time, after the deep parts had been well exposed, and the lateral portions held aside with retractors, and after my fingers had pretty completely separated the trachea from the œsophagus, it was thought best to open the thyroid cartilage for exploratory purposes. This was no easy task, and sharp cutting bone forceps were necessary before it could be accomplished, so firmly was it calcified. By this exploration it was quickly noted that the growth was well confined within the laryngeal walls. So without further loss of time the trachea was divided; first longitudinally through its upper three rings, and then transversely between the first and second ring. A Trendelenberg tampon tracheal canula was then inserted, but its rubber balloon proved faulty; consequently, I packed sponge around its main tube and used it as an ordinary tracheal tube, save that the tube and funnel for the anæsthetic connected with it were utilized during a part of the remaining time.

The larynx and upper tracheal ring were now rapidly separated from the œsophagus, and after this separation was complete from below the thyro-hyoid membrane was divided and then the re-

mainder of the lateral walls of the lower pharynx, the constrictors were dissected off from their insertions into the larynx, and the whole removed in one piece. Hemorrhage was checked, and then the parts explored for evidences of any extra-laryngeal suspicious tissue. None was found here, but I decided to remove the uvula, which had been for some time very sensitive, and in which a little firm nodule was felt. The upper part of the epiglottis, with its glossal and lateral connections, was also left *in situ*.

Particular attention was then given to every bleeding point, and hemorrhage, which had at no time been alarming or uncontrollable, was perfectly checked. A little blood had run down the trachea and was coughed up at intervals. The tracheal tube was then removed and a strong silk suture introduced on either side, through the skin and the upper tracheal ring which, it will be remembered, had been split vertically. These were the only sutures used, and were for the purpose, not of trying to pull the trachea up in the neck, but simply of holding it well to the front. A large single trachea tube of aluminum, made for the purpose, was then introduced and held by tapes around the neck. Over its upper surface fell the anterior-cut margin of the œsophagus. Iodoform was dusted sparingly throughout the wound and the whole cavity carefully packed with iodoform gauze, so arranged that a pathway to the œsophagus was left, this latter being lightly plugged with the same material.

This ended the operation, which lasted just about one hour. Dr. Phelps so carefully gave the anæsthetic that not once during its whole course did the patient's pulse flagg. Once or twice his breathing was disturbed, but apparently only by the presence of blood in the bronchi, and which was speedily expectorated. Shock was very slight. He was put to bed with hot bottles, and the temperature of the room ordered to be kept at 80° F. Five hours after the operation, finding that he had not vomited at all, and as he wrote me he was feeling somewhat faint, I introduced a soft rubber œsophageal tube through the wound and through a funnel poured a half-pint of strong egg-nog into the stomach. His temperature was then 101.8°, pulse 138 and respiration 40.

In this way he was fed every four to six hours, the nourishment being concentrated but fluid, at first mostly a mixture of Reed and

Carnrick's beef peptonoids in egg-nog. Quinine in good tonic doses was given, as also, later, fluid extract of coca and tincture of nux vomica; also hypnotics as needed, codeia being the only opiate employed and this sparingly. Not until the third day was the iodoform gauze touched, and it was not entirely removed until the sixth. It was replaced by fresh gauze or iodoform cotton. After the second day, when surgical fever had subsided, his temperature averaged 99°, and was often normal.

Convalescence was only broken by one incident, but this came near being disastrous. On the fifth and sixth days it was noticed that he seemed a little dazed, and his written messages were somewhat incoherent; and I was reminded of his similar condition after his previous operation. Late in the evening of the sixth day, while apparently asleep, and being watched by one pupil of the training school for nurses, he suddenly jumped out of bed, threw up a window (second story) and made ready for a spring. The nurse seized him by his night-clothes and pulled him back. Then ensued a severe struggle, during which she was severely bruised, he endeavoring to escape and she to hold him back; in a moment her calls for assistance were answered and he was put back in bed. But for her pluck he would have killed himself by his attempted leap. His acute mania was soon subdued. Next morning his temperature was only 99°, and he showed no evidences of his wild night, save that his thoughts were incoherent. In two days he had practically recovered, though his mind was not quite clear for two weeks afterward. This could not have been iodoform intoxication nor the effects of opium, because both had been used in minimum amounts; I therefore class it among those obscure cases of so-called "traumatic mania," about whose etiology we know pratically nothing.

I soon began, however, to dress his wound with cotton steeped in a saturated solution of salicylic acid and potassium chlorate, and to the stimulating effect of the latter I ascribe the remarkably rapid granulating process by which the wound closed.

Three weeks after the operation he rode a mile to his brother's house, having had not the slightest septic symptom, nor any untoward lung complication; in fact, the mania was the only incident of his subsequent recovery. In three weeks and a half the œsophageal

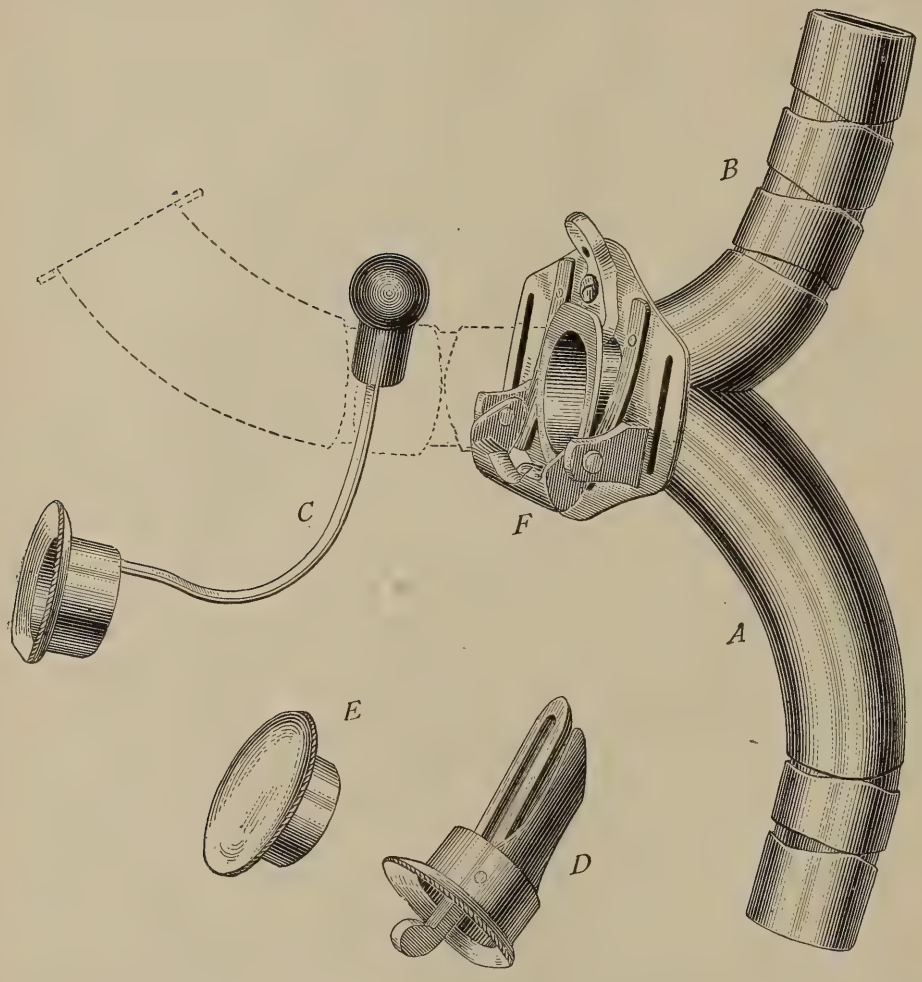
feeding tube was introduced through the mouth instead of by the wound, which was no longer sufficiently open. In five weeks he was wearing the tracheal portion of his artificial larynx; in six weeks the pharyngeal portion of it, was breathing through his nose once more, and was able to whisper so that he could be heard across the room. In seven weeks he was able to swallow soft solids, when the obturator of the upper tube was introduced. In eight weeks he was able, by means of the vibrating reed inserted in the tubes, to talk almost as loudly as you or I, and to articulate with perfect distinctness. And by a process of self-education combined with a certain self-reliance he has been able to learn to a certain extent to swallow ordinary food, and to drink, even without the obturator, he having acquired the knack of protecting the open upper end of the pharyngeal tube by the remainder of the epiglottis.

This operation has not yet been performed, all told, a hundred times; and in this country, but two or three times previously to this case. As nearly as I can gather, never have the processes of repair occurred with greater rapidity than here; in fact, as I recall the formidable wound, it seems almost incredible that healing could have taken place as rapidly as it did. Now as you see the patient, only fourteen weeks after operation, you observe only an opening barely admitting a finger tip, and which has had its present size for eight weeks. Through this small opening are introduced the various portions of this most ingenious mechanism known as Gussenbauer's artificial larynx, which it yet remains for me to demonstrate to you.

The one which the patient is wearing is made of pure silver and was made for him by Mr. A. M. Edwards, of this city, an ingenious and skillful jeweler. It was fashioned after this other one, whose parts I now show you, which was made for me by the same artisan in Prague who has made all of Prof. Gussenbauer's later instruments.

It consists of a tracheal tube of large size (*A*) with rings at its lower end permitting a slight motion, corresponding to the natural flexibility of the trachea. Through its front plate and through an opening on its upper curvature passes a second or pharyngeal tube (*B*), made also flexible (or not, according to the case); with an opening on its lower curved surface, so placed that a stream of air

may play freely through both tubes, even though the external outlet be closed. The upper end of the pharyngeal tube lodges behind and below the epiglottis, if this have been left *in situ*, or behind and below the base of the tongue, as the case may be. Around it the œsophagus granulates and closes, so that after the



healing process is complete the only passage from the pharynx into the larynx is by way of the metal tube. In order that fluids and solids may not pass through this, an obturator (*C*) is provided, which is passed through the external opening and up through the tube, so that its rounded upper end plugs the upper end of the pharyngeal opening, thus preventing passage of anything into the trachea. But since this would also shut off air, the obturator is attached below, not to a solid plug, but to a ring, as seen, which fits accurately into the external opening of the instrument, through

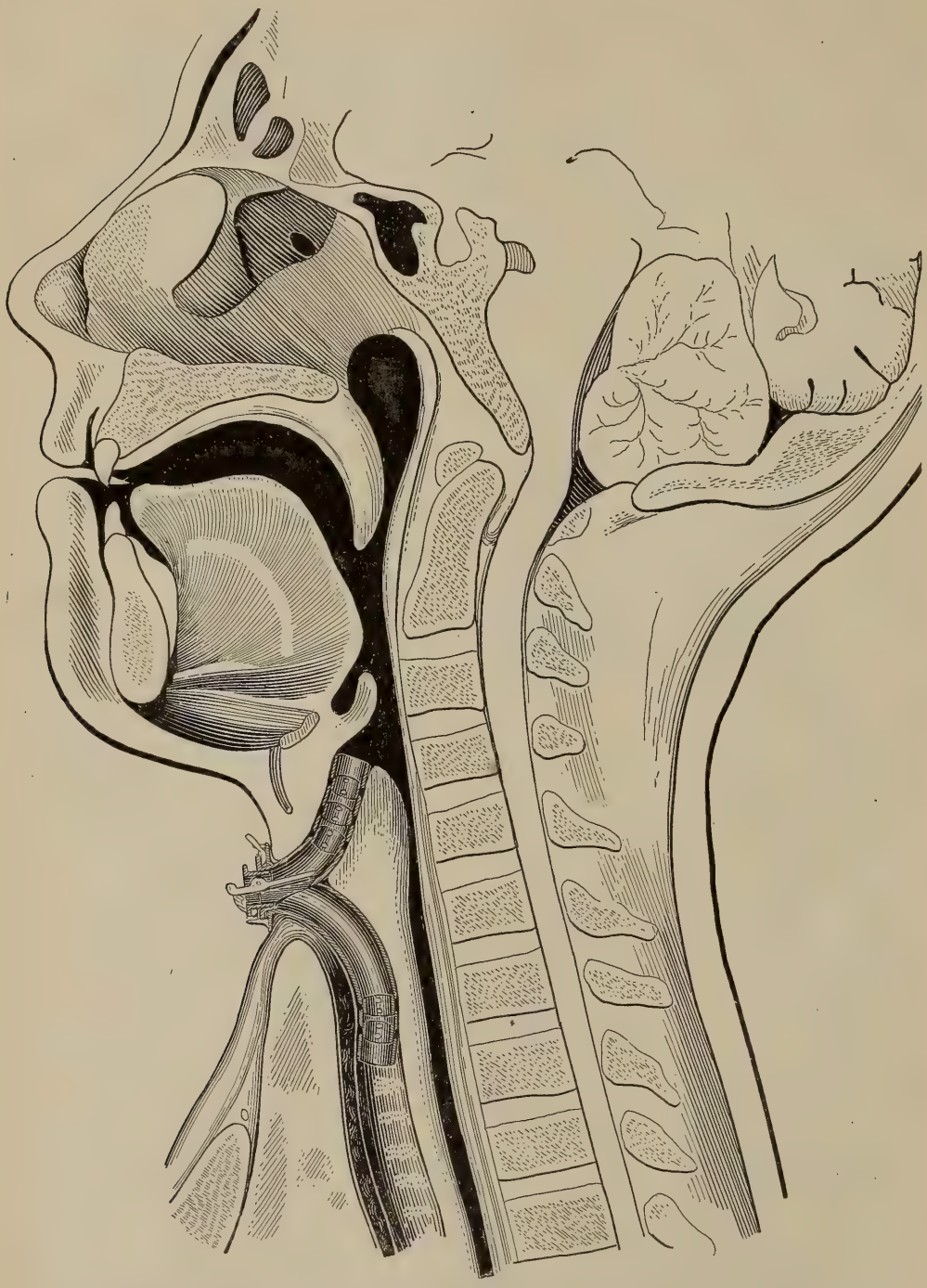
which, then, the patient breathes so long as this plug is worn. Except at meal times this simple stopper (*E*) is worn, so that at all other times he breathes naturally through the nose and mouth. After a time, by an instinctive education of the pharyngeal and buccal muscles, the upper end of the tube is protected during the process of deglutition, and patients wearing these instruments learn to swallow readily without the assistance of the obturator. Even thus soon, in this particular case, you see the patient unconsciously but easily swallows his saliva.

Now the feature of greatest interest about this apparatus is the vocal part. Let this case forcibly remind you that the vocal cords do nothing in articulate speech but furnish the tone or sound, and that articulation is all carried on by parts above the larynx. With only the simple stopper in place, by aid of which the air current is directed toward the mouth, the patient will read to you in a loud or 'stage' whisper which is distinctly audible all over this large room, and you realize how perfect his articulation is. Now you can understand how we may get a distinct speaking voice providing we can introduce some substitute for the vocal cords, something which, by vibrating in the air current, may produce a distinct *tone.*

And in this simple mechanism (*D*) we have such substitute. Only a free metallic reed, like a melodeon reed, playing freely in a movable slotted bar, and fitted inside of a stopper like the other one. This movable bar carrying the reed has an external lever, by means of which the wearer is enabled, with a touch of his finger, to throw it into or out of the air current, and thus—as it were—to voluntarily open or close his glottis. Placing this part of the instrument *in situ*, and throwing the reed into the air current, the metal strip vibrates as it does in the jew's-harp, and the sound thus produced is converted, by the articulating parts above, into something more than the whisper you heard before,—*into distinct speech.*

To be sure his 'voice' is now a monotone, but it is nevertheless a voice, and he is just as capable of carrying on a conversation as you or I.

We may regard, then, the results of the operative and subsequent procedures in this case as perfectly successful, and as justifying such radical measures in selected cases. As you see the patient to-day



[This figure, modified from one of Schüller's, represents the instrument *in situ*. The artist's notions of topographical anatomy have led to some distortion of the anatomical relations, but without interference with the main purpose of the illustration.]

he is the picture of health, without the slightest suspicion of return of the malignant disease. I might add here, parenthetically, that on careful microscopical examination the growth was found to be distinct epithelioma. But whether it returns in time or not, it is scarcely likely that either the patient or myself will regret the operation which has already prolonged his life and saved him from the agony of suffocation.

Let me only add that this apparatus does not represent the first efforts that were made, even by Gussenbauer who was the first to succeed, to devise a substitute for the larynx, or vocal box, but it shows the instrument in its most perfect form. And I know that the ingenuity and surgical ability thus displayed by that celebrated surgeon in the accomplishment of this purpose will command your sincere admiration.

LIGATURE OF VERTEBRAL ARTERY FOR EPILEPSY.

ALEXANDER, of Liverpool, has reported twenty-one cases where he has ligated the vertebral artery between the atlas and axis for the cure of epilepsy. Of these three were positively cured, and only three failed to gain some benefit.—*Brain: Vol. V.*

Andrews, of Chicago, has operated on three cases, in the same way; the third quite recently. In his last case seizures were recurring twelve to fifteen times a week, and the mind was giving way. He ligated the left vertebral. When the artery was tied there were pallor, shock, and external strabismus, such as had been noted before. The patient went home in one week, not having had a single paroxysm after the operation.—*Jour. Am. Med. Association: August 15, 1885.*

A PATHOLOGICAL PUN.—A *bon mot* credited to the late Thomas Gold Appleton, in the volume of his memoirs just published, was made to a friend who advised him to consult an aurist for an increasing difficulty of hearing in his later years. "It may be only wax in your ears," said the friend. "Ah, my dear!" he replied, "I fear it is not wax, but wane."—*Boston Medical and Surgical Journal.*

GIANT GROWTH OF THE EXTREMITIES.

By Charles Graefe, M. D.
Sandusky, O.

The case I am about to describe is one which has received considerable attention from the lay press, but stands alone, so far as I can gather, in the medical literature of this country. Not so in Continental literature, for we have the records of a number of cases, the first being described by Wagner in 1842; this was followed in 1858 by a case which Chassaignac presented to the Société de Chirurgie, of Paris, since which time a number of cases have been reported by English, French and German writers, and in 1879 Wittelshöfer, of Vienna, gathered fifty-three cases, thirty-one being of the upper and twenty-two of the lower extremities; but in all of his cases there is not one where the two lower extremities are affected as in our case; the greater number being single fingers and toes.

F. M.—Age, twenty-five; height, five feet, one and one-half inches; weight, one hundred and sixty pounds.

As will be noticed in the accompanying plate, we have, above the hips, a young lady of well-proportioned figure, while the lower extremities are enormously enlarged, the right foot being eighteen inches long, twenty and one-half inches in circumference at the ball, twenty-four inches at the instep, and the leg twenty-two and one-half inches at the calf and twenty-three inches at the knee; the left foot is sixteen inches long, twenty inches at the ball, and the leg nineteen and one-half inches at the calf, and twenty-two at the knee; there was a supernumerary toe on each foot, which was amputated in infancy. She is active, perfectly able to do housework, and runs a sewing machine without much trouble.

Accepting Cohnheim's definition of a new growth as that variation of structure where the enlargement differs in its morphological character from the locality from which it springs, we have, in this case, no new growth, as there is a proportionate enlargement of all the parts, bone, muscles, vessels, etc., which enter into the formation of a normal limb. On the other hand, if we consider hyper-

trophy as that state of a part in which the nutrition is performed with greater activity, so that, on that account, the part acquires unusual bulk, we can consider this an hypertrophy, though congenital, and functionally pathological. Having decided that the condition is congenital it will be necessary to explain its origin.

(1.) In the condition called myxoma we have a purely fœtal structure, differing in its histological basis from anything found in the adult human body.

(2.) In the lipoma we have an abnormal collection of cells of the same histological construction as a part of the adult human body, but abnormal in the fact that they do not, in this condition, enter into the *plan* of construction of the body.

(3.) In this case, as has been stated, as well as in many others, we have supernumerary toes.

In the first instance we have a growth differing altogether from the normal adult body in its histological character. In the second we have a cell structure similar to that of the adult body, but not entering into the general plan of the construction of the body. In the third we have extra members plainly visible, homogeneous in structure but supernumerary.

Going back to the biological basis of all organized beings, the cell, by a process of division, subdivison and growth, we have formed the various types of living beings. This division, subdivision and growth of cells, after a fixed plan, ultimately results in what we call the perfect human body, but by a hypergenesis we sometimes, as has been shown, have supernumerary members produced. As all members have a cellular basis, in such cases we must have supernumerary cells; having supernumerary cells which result in supernumerary members, though of the same type of construction, is it not reasonable to argue that the cellular basis of the myxoma is supernumerary, and being carried from fœtal life awaits but an active cause to develop its latent energy and make it grow; or that in the arrangement of the fat cells a supernumerary cell may not be found, which being put in a condition for growth would produce the lipoma?

Finding a reduplication of members, evidence of a supernumerary cell production in the embryo, we can but conclude that the

whole enormous growth is due to a fœtal supply of supernumerary cells making an enlarged plan of construction and placed in a condition favorable to their fullest development.

In regard to treatment little can be said. When single fingers or toes are affected, amputation would be indicated, and it is suggested that where the whole extremity is found in this condition at birth, continuous compression by bandages might be effectual in preventing so great a deformity.

703 Market Street.

PORTIONS OF THE INTRODUCTORY ADDRESS:

Delivered at the Opening of the Winter Session, 1885–6.

BY JULIUS POHLMANN, M. D.

Lecturer on Physiology in the Medical Department, University of Buffalo.

Gentlemen of the Faculty, Fellow-students, Ladies and Gentlemen:

THE pleasant duty has been relegated to me, to-night, to bid you all a hearty welcome to the celebration of the fortieth anniversary of the Medical Department of the University of Buffalo. Born in 1845, when the population of our city numbered but 30,000, we can look back with pride upon a healthy activity extending over a period of forty years. Fifty-one medical schools have appeared and have disappeared in the United States during the present century. Vigorous from the beginning, our school has always held its own, and now, at a time when the experimental stage of infancy has long since passed, and it has entered upon the age of strong manhood, it feels its powers more than ever, and is better prepared to hold its rank among the leading medical schools of the United States than at any time in its previous history.

One by one the older members of the Faculty leave us. Within a comparatively short period, Profs. Hadley, Potter and White have been removed from our midst and have paid that final tribute which we all owe to mother Nature. Mourned by a vast circle of

friends and admirers, their memory remains with us as a shining example worthy of imitation; and as we to-day celebrate another birthday of the Buffalo University, let us not forget to honor the dead who have labored so faithfully for the welfare of the institution.

Profs. Miner and Moore have resigned from the chairs which they so ably filled for many, many years. Ill-health on one side, and an increase of professional duties on the other side, forced them to sever their connection with our college, much to the sorrow of large numbers of friends and students. Although we knew that their interest in our welfare never ceased, we felt sorry that circumstances robbed us of their valuable counsel and their extensive experience.

This year again we have to record the loss of another member of the old Faculty. After filling the chair of physiology for twenty-five years, Dr. Mason has left us to take a rest from active labors and enjoy the remainder of his life in quietness and repose undisturbed by professional cares.

So, looking over the early history of the Medical Department of the Buffalo University, and comparing the list of the Faculty of earlier years with that of to-day, we find that there is but one left; one who has for thirty-two years filled the chair of Principles and Practice of Medicine; whose fame as a teacher and physician has been carried through the land by hundreds upon hundreds of graduates who testify, by their professional reputation, to the thoroughness of the instruction they have received from him. Yet in the full possession of the vigor of strong manhood, as a man whom time touches with the most gentle hand, Dr. Rochester takes his accustomed honorary place with us to-night as Dean of the Faculty.

* * * * * * *

We have been treated of late, again and again, to semi-scientific discussions about the over-crowding of the medical profession in the United States, and the inadequate training which the student receives at the present day. Curiously enough, in ninety-nine out of one hundred cases, it is a doctor who thus tries to run down his own profession; it is mostly the older physician who attempts to make the people believe that the instruction given in *his* time, the amount of training *he* had to undergo, were far ahead of that re-

ceived by the medical student of America at the present day, and that laws should be made to prevent young men entering the profession.

To all such would-be reformers, who imagine that all ills can be cured, all shortcomings be remedied by some form of legislative law, we can justly say that all their endeavors resolve themselves into mere talk. A fine display of language, however, will not remedy an evil when it merely skims over the surface and does not touch the real causes at all.

Medical education of to-day has advanced in America with the times, and can be accepted as a fair criterion of the mental status of the people. True, we had some brilliant men twenty-five years ago who are, *now*, upheld to us as examples of what the medical profession was at that time. But in our just admiration of the past we must not be unfair to the present. It is perfectly safe to assert that the average student of twenty-five years ago would not be able to pass an examination to-day, and no slurs, no ridicule launched forth against medical colleges and medical students, in popular literature, will change these conditions. It is a fact that the number of physicians increases in undue proportion to the population, but this is not the fault of the medical schools; the cause of it lies deeper down, but a discussion of it would lead us too far away to-night.

Laws, which are looked upon by so many as the panacea for everything, will prove practically useless at the present time when they attempt to meddle with medical education. Here in our great republic, where a law, in order to be effective, must have the support of at least a fair, intelligent minority, we can coach almost anything through the legislature, but of what benefit will it be? It will either be a dead letter, or it will do more harm than good. Educational problems have never been advanced by premature legislation, and laws for that purpose, when advocated by a few only, have never been of any benefit to the cause. As long as the medical profession, in itself, is divided into so many cliques, factions and schools, it does seem almost ridiculous to ask the representatives of the people, who, as a rule, are woefully ignorant about the wants and necessities of the profession, to make laws for their government.

Such a proceeding resolves itself into something like this: "We, a few doctors, who would like to represent the medical profession of the State, or the United States, as the case may be, have arrived at the conclusion that the existing laws are insufficient, and that the profession, as a whole, unable to govern its own affairs, needs some additional legislation. We are, however, entirely unable to agree as to what these laws should be, because each faction seems to be satisfied that the needed laws should apply to the other but not to itself. Nevertheless, we, as the would-be representatives of the whole profession, not knowing exactly what we do want just now, come to you, the representatives of the people, who certainly don't know as much about what *we* want, as we do ourselves; and we pray you, for God's sake, to make some laws for us which shall supply that want about which we know so little, and about which you know less, but which shall govern our conduct:"—and this in the year of our Lord, 1885!

No law has ever made a people moral, no law has ever helped to make them intelligent, unless there existed a demand for such laws, and when that time arrives the appropriate changes will have been made by medical colleges, without laws, and their passage will meet with no opposition whatever.

If we do not find first-class schools of learning in America today, it is due to the fact that a necessity for them is not felt, *they are not wanted!* But the time is coming, knowledge is spreading, and it will not be very long before American students need not go to Europe to learn whatever they please. Then our own universities will be sufficiently endowed to carry out their missions as first-class institutions of learning; original research will be fostered and appreciated, not for the amount of money that can be made out of it, but for its own value; then society will not consist of those who have money and those who have no money, but intelligence will find its proper place independent of a bank account and exert its beneficial influence on all sides.

At present we are largely living in that ornamental stage which, as a necessary phase of evolution, precedes the useful stage. We find, for instance, that the 153 theological schools in the United States have together 164 endowed professorships, and an annual

income from endowments which amounts to $528,500. As they graduate about 770 students every year, we may say that every minister has been aided during his student years by the sum of $755, paid for him by that generous people who endowed theological colleges.

Compare that with our schools of medicine, and then try and reconcile the facts with the great rhetorical displays about high standards. The eighty regular colleges of the land graduate about 3,600 students annually, and their total endowments produce the munificent income of $18,200 per year, or about *five* dollars for every graduate. In other words, public generosity provides for every graduating minister, $755, but only five dollars for every graduating physician! Surely, first-class medical schools are impossible under such conditions; evolution has not yet progressed far enough, we have not yet arrived at the useful stage. A first-class school of learning cannot exist without endowments; original research cannot be carried on without funds, and no amount of legislation will ever change these conditions. Even such a gift as that recently recorded from Mr. Vanderbilt to the New York College of Physicians and Surgeons is of the ornamental kind, because it is not devoted to research, but to an imposing building to perpetuate the name of Mr. Vanderbilt. The endowment of six professorships from this fund would do an immensely larger amount of good, but—"ornament precedes use." If those who like to pose before the public as reformers in medical education would leave law-making alone and exert themselves to provide funds for the endowment of medical colleges, their efforts would be productive of more good to the profession; but, of course, their own individual interests would not be advanced as much as by their present course.

Our highest aim at present is *money;* wealth we appreciate: aside from this everybody is, in a social sense, very democratic, and democracy only too often tends towards mediocracy. All men are alike before the law, consequently one man is as good as another, and why should one think he knows more than another? But in spite of this we are very fond of titles. It has been said by European travelers that the titles most often met with in the United States were captain, colonel and professor. And, of course, as some men

are professors, there is no earthly reason why all should not be professors according to the laws of such democracy. Consequently, the leader of but half a dozen musicians styles himself professor; another professor travels with a troupe of trained dogs; æronauts, acrobats, roller-skaters, dancing masters, all rejoice in the possession of such a title, and the list could be lengthened *ad infinitum*. Indeed, you need not start a new medical college to obtain a professor's title; it can be had considerably cheaper than that. But, let me call your attention to the fact that the title does *not* make the man. Unless you can show by your actions, demonstrate by your attainments, that you deserve the title, even so honorary a distinction as doctor or professor will be a mere hollow sound. If the title has to dignify the man, we can only feel sorry for the title. If it honors the man, who in return adds dignity to it, then we meet conditions as they ought to be. Remember, that when you leave this college in the spring, privileged to add a "Doctor" to your name, you are merely entering upon the threshold of the medical profession, and that it will be left to you to demonstrate to the world that the title has been conferred upon the right man.

Medical schools are to-day so well known all through the land that no amount of puffing or advertising will suffice to raise one above the other, permanently. The guarantee which these schools give to the public rests entirely in the reputation of the members of their faculties. The fact that so many young men crowd into the medical profession is not due to the presence of medical colleges; such an assumption confounds cause and effect; the reason for it lies in the whole constitution of our social life, and as soon as *this* changes, the effects will differ correspondingly, but not sooner; and all individual efforts, applied in the wrong direction by beginning in an attempt to change the *effect* and ignore the *cause*, will prove useless.

The following few figures will show you how well the Buffalo Medical College has advanced with the times: In 1873 the Faculty consisted of nine teachers, and the course of study extended over sixteen weeks every year. In 1885 we find a Winter's Course lengthened into twenty-two weeks and the Faculty increased to fourteen, in addition to a Spring Course of eight weeks with a Faculty of ten

additional teachers, making a total of thirty weeks of study, and a staff of twenty-four teachers. It would be an easy thing to increase this number to forty or fifty, *i. e.*, on paper; but for practical, useful purposes, the smaller number is as good as the largest, even better, because the time at the disposal of the students is limited.

The student of theology meets with every encouragement; indeed we are told that there are not half enough, although, with 145 theological schools, 4,921 students, and, annually, 770 graduates, there seems to be no immediate danger that the demand should exceed the supply, but if a young man signifies his intention to study theology, he meets support on every hand; he finds well-endowed institutions, and nothing hinders him to attain that degree of efficiency which will enable him to pursue his calling as a minister of the gospel to the satisfaction of the people.

If a young doctor of divinity wants to become a missionary, he finds all the help he needs, and the idea that he may possibly risk his life while preaching the gospel among the heathen, ensures him the admiration of all good Christians, and often the hearty financial support of many who ignore the poor heathen at home who vegetate in poverty, ignorance and disease almost at their very doors.

A school of law is also looked upon as an eminently respectable place. Elaborate laws need, as a matter of course, able expounders, and as good law-abiding citizens we look upon the training of a number of young men for that purpose as one of the necessities of the present times. And then lawyers, you know, have the whole world open to them; they may become mayor of a city, governor of a state, even president of the United States, not to mention other lucrative and honorable offices within their grasp. Consequently, law schools and law students are duly appreciated all through the land; and even if we at times hear a statement that there are too many lawyers, such comments do not excite any special interest, are not looked upon as a sign of danger to the community, but more as a fact detrimental to the lawyers themselves.

The forty-eight law schools in the United States graduated in 1882–3 1,184 students, not to mention the large numbers who study in private offices, which would perhaps increase the total to 2,000 or

more, and so a lawyer famine is not to be apprehended in the near future.

But when we come to medicine, popular prejudice besets the path of the student with difficulties; he is hampered on all sides during the time when he has to lay the foundations for *that* knowledge which shall enable him to alleviate suffering, restore lost health and call back almost from the portals of death those whose lives were invaluable to their friends.

Popular opinion regards a dissecting-room with a shudder. Everybody is satisfied that a physician should be a man of knowledge, but dissection is a thing too horrible to contemplate. Indeed, nobody seems to care where the physician obtains his knowledge as long as he leaves dissecting alone.

This rather prevalent notion is partly due to ignorance on the subject, but also partly due to the behavior of some few of the students themselves.

As we enter upon a new year of study, it seems appropriate to call your attention to this fact. Do not allow your reputation to be ruined by one or two; prohibit all coarse jests and every trace of vulgarity from the dissecting-room, and when your knife enters the body of the dead, let it be with the full understanding of the responsibilities you have to assume in later years and for which you are now building a foundation.

Another stumbling-block which needs removal for the benefit of medical science, is found in the well-meaning, but often misguided sympathy for the lower animals.

We all know the greater value of an object-lesson than a simple lecture; we all know how much stronger an impression is made on the mind when the idea enters it by two channels, eye and ear, than if conveyed by the ear alone; but when we strive to apply this principle to the teaching of medicine, and use for our illustration some valueless, ownerless animals. which, under the influence of chloroform never feel any pain, then we are accused of cruelty, of heartlessness.

We have investigators who are kinder to the animals with which they experiment than many parents are with their children. Indeed, vivisectional experiments, ninety-nine out of a hundred of which

are painless to the animal, are performed for the direct benefit of humanity. There is no other line of advance open to the physician and surgeon; the action of a new medicine or the feasibility of a new form of operation can be tried only upon living animals or—upon man; and the question is, which of the two shall arouse our warmest sympathy. If we find the hearts of our fellow-citizens so overflowing with *beastiarian* kindness that they can ignore human pains in view of any possible suffering entailed upon a few dogs and cats, then, by all means, let us abolish vivisection, but let us then make it a point to try the new drug or the new operation *first* upon those who considered it a cruelty to test the value of the discovery upon a lower animal. If, on the other hand, our hearts are filled with *human* kindness, let us gladly welcome the vivisectionist who considers himself justified in sacrificing every available dog and cat in the vicinity, if by such action he can be the means, directly or indirectly, of saving one human life.

The Buffalo Medical College has been the first institution in America which taught physiology by the aid of vivisection, and it is quite safe to say that this department of science shall not be neglected in the future, and that the well-earned reputation of our school in that field will be maintained, if not increased. The phenomena of life shall be illustrated by living animals whenever practicable and whenever thought desirable for the more thorough comprehension of the subject under discussion.

After all, these restrictions placed upon the study of medicine are the results of ideas perpetuated by inheritance during long generations, and they change slowly in proportion to their age. We cannot expect that those who have never received an explanation of the value of a dissecting room and vivisectional experiments, should be able to understand their object. Unfortunately for us, the less the average human being knows about a subject, the more he is ready to pass a dogmatic opinion on it; and the less he is able to pass judgment upon the merits of anything, the more he will be influenced by preconceived notions. But it will not always be thus,—civilization is advancing; the average man desires and obtains more and better knowledge from year to year, and he will, on account of this, be more able in the future to appreciate the true value of the

physicians and medical colleges in their relation to the community.

Do not confine your energies entirely to the successful cure or prevention of disease, but take part, during your leisure hours, in the educational problems of the day; try and diffuse a certain amount of that eminently necessary knowledge which only a physician can give, and which under our present educational system is most systematically ignored; and when in after years your community is satisfied that the doctor is the right man in the right place in every respect, and a discussion arises as to the relative merits of the different colleges, then turn with pride and pleasure to the diploma hanging in your office, which proclaims to the world that you are a graduate of the Medical Department of the University of Buffalo.

Chemical Incompatibility, Without Therapeutical Incompatibility.

SOME patients in a French military hospital were suffering from ulcers caused by the bite of an unknown insect, all modes of treatment proving useless until the following was tried: the ulcers were first washed with a five per cent. solution of carbolic acid, then cauterized with lunar caustic, and finally dusted over with iodoform. The treatment was successful, but the surgeon-major noticed that after being applied the iodoform became liquified and swelled up owing to the formation of some gas. The explanation of this phenomenon was referred to Pharmacien-major Raby, who reported that the primary reaction was between the iodoform and silver nitrate, with a secondary reaction upon the carbolic acid, the result being a number of very complex compounds. In the absence of a sufficient number of cases experimented upon, it is difficult to say whether the very beneficial effects of the treatment were due to any particular compound, and if so, to which. This topical application, as described, was eminently successful, however, in cases most rebellious against all treatment.—*Chemical Gazette.*

DR. B. G. LONG, of this city, reports a case where a woman attended by him in her second labor, was delivered of a strong, well-developed, and apparently full term child, when her first child was just 294 days old. This might be termed making close connections. We have failed to find a case on record where so short a time elapsed between two births.

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BUFFALO, N. Y., DECEMBER, 1885.

NOTICE.

WE desire to call attention to the quality of the illustrations to be found in the present number of THE MEDICAL PRESS, and to its general appearance, which we think are such as to commend it to all. It is part of the policy of the management to publish original contributions in befitting style and with suitable illustration, and we beg to remind the profession to whom this number may come of this fact. Those who subscribe before January 1, 1886, will receive the back numbers *gratis*.

THE STUDY OF COMPARATIVE PATHOLOGY.

COMPARATIVE Pathology is, at the same time, an extremely important and a sadly-neglected study. With an inexhaustible field for observation, with possibilities not limited to a hospital dead-house, with specimens obtruded, often, almost under our noses, it has yet found, strange to say, but few casual students, and but very few scientific investigators. That this has been most unfortunate every one will acknowledge, though few are stimulated to research by

the confession. If there be one reason for this, more than another, we imagine it to be that, to the narrow-minded, Compartive Pathology does not open up the road to wealth. We say to the *narrow-minded;*—nevertheless, those who have most thoroughly devoted themselves to it have not found it so. Let such remember the almost countless millions of francs which Pasteur saved to stricken southern France when, owing to the silk-worm disease, the silk crop fell off to such alarming extent as to threaten financial disaster and physical ruin to an immense population, and when, by the researches which he carried to such a brilliant conclusion, he showed the nature of the disease and its simple remedy, and thus restored joy and prosperity to a nation. No more conspicuous instance of the profitableness of apparently profitless study has ever been furnished.

Among the British, John Hunter's name has stood before the students of successive generations as that of one who studied disease in animals as a devoted naturalist studies their habits, and who consecrated his life and his means to this study, and displayed a tenacity of purpose which nothing could shake. The results of his studies are shown in his various papers, his collected works, in the grand museums and collections which he built up with such indefatigable industry, and lastly, in the works of his numerous pupils and followers who have succeeded in shining in a light reflected from his own luster. From Hunter's time until our day there have not been lacking careful and consciencious British students, yet few there have been who have accomplished as much, and none who bid fair to accomplish more than Mr. J. Bland Sutton, F. R. C. S., whose name is coming into a rapid and well-deserved prominence as an authority in comparative pathology. To a knowledege of anatomy almost equal to Hunter's, and an acquaintance with modern physiology and pathology far more advanced than his, he adds familiarity with all the modern methods of research which has superbly equipped him for the utilization of the advantages offered by the various zoölogical collections of the British metropolis. Equally at home with the dissecting knife or the immersion lens, he is equally an authority on an anatomical anomaly or a vexed question in bacterial pathology.

All of his communications to the various London scientific soci-

eties and journals are worthy of careful study; and none more so than a recent one on the subject of Tumors in Animals. (*Journal of Anat. and Phys., 1885.*) In a very elaborate paper, he presents a large amount of information and a large number of cases and illustrations, showing how much more common are these lesions than is commonly supposed. By investigations of this character, not only is light shed on certain ontogenetic questions of great importance to pathologists and naturalists, but the matter of proper classification is somewhat simplified and histological relationships made clearer.

Moreover, as one reads of cases of round-celled sarcoma in the breast of a plover, spindle-celled sarcoma about the dorsal fin of a golden carp, glioma in the eye of the monkey, myeloid sarcoma in the bones of rat, melanosis in the horse, sarcoma myxomatodes and alveolar sarcoma in the dog, and psammoma in the choroid plexus of the horse, one comes to the conclusion that the animals are not exempt from this form of malignant tumor, at all events.

And on reading that portion of the paper devoted to the carcinomata, one finds equally marked evidence of their frequent appearance within the widest limits. The author terminates his paper with certain conclusions, which he thus summarizes :

"1. No tumors are peculiar to man; certain forms appear with greater frequency in him than in other animals,—notably the cancers. This may depend on paucity of observations, but the conclusion is warranted by our present knowledge.

"2. Sarcomata, fibromata, osteomata and enchondromata are the most widely diffused of all growths; they occur in fish and all intermediate forms up to man. We have reliable evidence of the occurrence of osteomata in extinct forms; these growths constitute an ancient inheritance.

"3. Fatty tumors are almost entirely confined to animals long domesticated,—the ox, horse, sheep, etc.

"4. Odontomata are of very frequent occurrence in mammals."

This paper alone would justify us in saying that, while Mr. Sutton is not alone in his chosen field of research, there is no one among his British compeers who is doing as much to increase our knowledge of it as he. While few, then, if any, of us can ever rival him, there is nothing to prevent every one, even the most isolated country practitioner, from trying to imitate him, since there is not one lesion which any one may discover in fish, flesh or fowl, which, if carefully studied, may not help to throw light on some question of disease in that noblest of animals—man.

THE MIDWIFERY LAW IN OPERATION.

The tide of immigration has introduced into this country a certain custom of a primitive nature, which, engendered elsewhere, has been fostered and encouraged until the magnitude of its influence and the questionable character of its results have aroused the physician to inquire whether its unrestricted sway be for the weal or woe of the public health. During the past year the relations of the so-called midwife to society have been subjected to investigation.

The attention of the profession was attracted to the matter by an essay presented to the Buffalo Medical and Surgical Association, entitled, "The Status of the Midwife in Buffalo," which contained the surprising and alarming facts that about two-thirds of the births recorded in this city were reported by women who acted without the sanction or interference of the law. No qualification was requested nor accountability demanded. Detailed consideration of their origin, low grade of intelligence, incomplete education and mode of obtaining it by blundering on through an unlimited probation, only made the case more lamentable and the need of determined action more urgent.

A committee appointed to investigate as to the results of such practice made a damaging report, strongly urged legislation, and presented a draft of a bill to "Regulate and restrict the practice of midwifery in Erie county by others than legally authorized physicians," for the society's consideration. The intrinsic thought was to qualify and then legalize a midwife to practice, thus bringing her under the jurisdiction of the law. As a radical measure, it provoked criticism, and the conservative element counseled progress "with measured step and slow." By a wise policy the whole matter was referred to the Erie County Medical Society. At a special meeting the bill was adopted as read, sent to the legislature and returned a law. We publish below the act in full.

In accordance with its special requirements the judge of Erie County has appointed Drs. M. D. Mann, H. R. Hopkins, P. W. Van Peyma, J. H. Pryor and J. W. Keene, as the Board of Examiners. Dr. Mann was elected President and Dr. J. H. Pryor, Secretary and Treasurer. The Board has held four examinations, and thirty-eight candidates have already appeared before it. Other examinations

will be conducted during November and December, as that portion of the law restricting and governing the right to practice becomes operative on the first day of January, 1886. We are informed that no announcement as to the result of the examination will be made until that time. From the experience gained, however, the examiners are strongly impressed with the fact that a controling power was sadly needed and will prove beneficial.

The profession in Erie County can give material aid to the Board of Examiners by calling their attention to any practicing midwives who have failed to appear before it for the purpose of showing qualifications. The full operation of this new law may agitate public opinion and give rise to other questions which have been fought and settled in Germany, England and other countries.

No matter how near to the right it may appear to abolish the midwife, the practical enforcement of such a theory will demonstrate its impossibility.

The desire for the midwife, among a large and growing population, is deep-rooted, immovable, and owes its origin to facts of circumstance and condition beyond argument. She has a work to perform, and will exist as a social factor. The pioneer reformers did a wise and beneficent act in fettering this class by the law, thus rendering it possible to elevate the standard and guard the people from reckless injury, which ignorance made self-inflicting. Their course has been far-sighted and judicious, inasmuch as they made no provision for means or method of qualifying the person who desires to practice midwifery. Probably they will make it manifest that many are unqualified. It has never been proven before.

How, then, shall a person who wishes to qualify before the Board of Examiners gain the requisite knowledge? A way of teaching must be devised that women may learn the art of midwifery, to help the poor who need them, and the profession in Erie county, aided by the Board of Examiners, can plan the method and scope of the required training so fitly that midwives may become benefactors instead of nuisances. It is to be hoped that the Board will exercise its function with rigorous power and render effective an excellent law, which if well executed, will be an inestimable boon to humanity. In supporting the best midwifery law ever passed in the United

States, the medical profession of Erie county exerted its inherent right to guard and protect the people. The right and motive were respected. If, by mutual sympathy and united act, the profession would assert its true position as mediator between society and the State on questions of health, more abuses might be abated than it now takes cognizance of.

For the sake of those who are not familiar with the law, we herewith append it.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. On or before the first day of July, eighteen hundred and eighty-five, the County Judge of Erie County shall, by an order to be filed in the Erie County Clerk's office, appoint a Board of Examiners in midwifery, to consist of five members, who shall have been licensed to practice physic and surgery in this State, and thereafter as often as any vacancy shall occur in said Board, said County Judge shall, by a like order, fill such vacancy.

§ 2. Immediately after the filing of said order, said Board shall organize by the selection of one of its members as President, and another as Secretary and Treasurer, who shall hold their office for one year, and be thereafter annually elected, and shall adopt and have power to adopt and enforce such rules and regulations as are necessary to carry out the purposes and provisions of this act.

§ 3. Such examiners shall meet on the first Tuesdays of October and April in each year, and on such other days as such Board may appoint, in the City of Buffalo, after due notice thereof is publicly given, and shall then examine all candidates of the age of twenty-one years and upwards, possessed of good moral character, who shall present themselves to be examined for license to practice midwifery in the County of Erie, and shall, on receipt of ten dollars, issue their certificate to any person so examined who shall be found by them to be qualified, which certificate shall set forth that said Board has found the person to whom it is issued qualified to practice midwifery, and shall be recorded by the Clerk of the County of Erie in a book to be kept by him for that purpose. All moneys going into the treasury of this Board shall be applied to defray the expenses of this Board.

§ 4. Any person who has received and recorded such certificate shall thereupon be designated a midwife, and authorized and entitled, within the County of Erie, to practice midwifery in cases of normal labor, and in no others; but such persons shall not, in any case of labor, use instruments of any kind, nor assist labor by any artificial, forcible or mechanical means, nor perform any version, nor attempt to remove adherent placenta, nor administer, prescribe, advise or employ any poisonous or dangerous drug, herb or medicine, nor attempt the treatment of disease, except where the attendance of a physician cannot be speedily procured,

and in such cases such person shall, at once and in the most speedy way, procure the attendance of a physician.

§ 5. Said Board of Examiners shall have power, on proper cause shown, and after hearing the person holding their certificate, to recommend to the County Judge of Erie County, the revocation of the same, and said judge shall have power to revoke such certificate and license.

§ 6. Any person who shall practice, or, without the attendance of a physician where one can be procured, attend a case of midwifery or obstetrics within the County of Erie, after the thirty-first day of December, eighteen hundred and eighty-five, without being duly authorized so to do under existing laws of this State, or without having received and recorded the certificate provided for by this act, and any person who shall violate any of the provisions of this act, shall be guilty of a misdemeanor, and on conviction thereof shall be fined not less than fifty dollars nor more than one hundred dollars, and shall forfeit any certificate theretofore granted under the provision of this act.

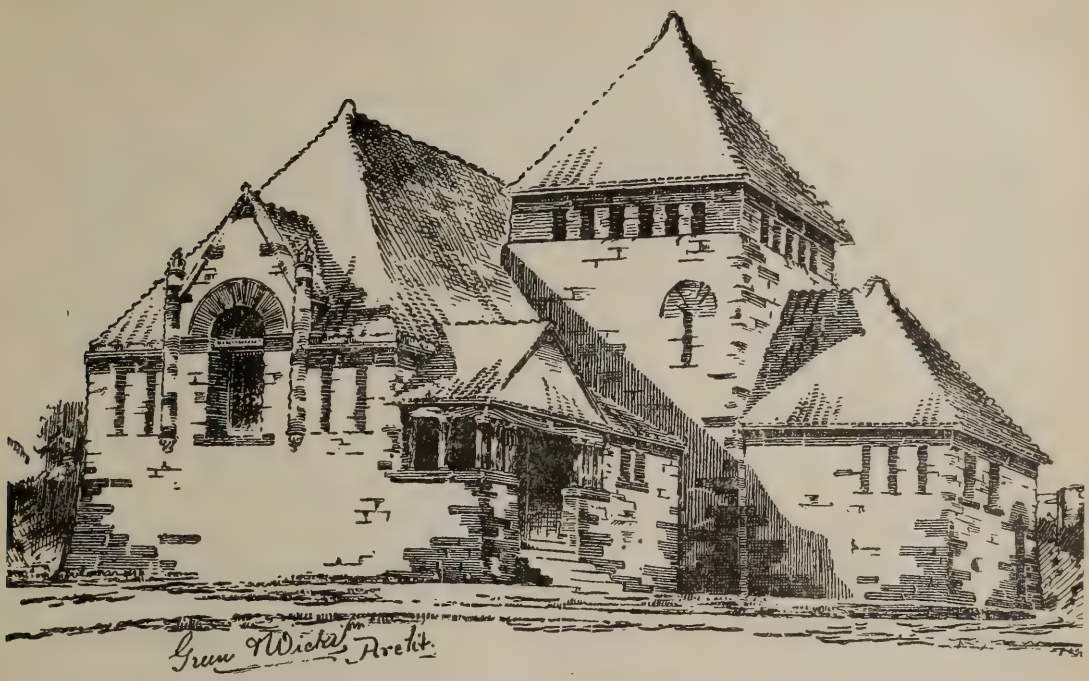
§ 7. This act shall take effect immediately.

THE NEW BUFFALO CREMATORIUM.

The Medical Press would congratulate its readers on the near completion of Buffalo's new Crematorium, and by courtesy of the *Buffalo Express* is enabled to herewith present a graphic representation and a description of the ground plan and elevation of the building "now in the course of erection on Delevan avenue, between Delaware and Linwood avenues. The building is of a composite style of architecture, and will be built of Medina stone, with slate roof. The outline of the building is a pleasing one, and the architecture is of such a character that it resembles a church more closely than a place where any mechanical operation is to be carried on.

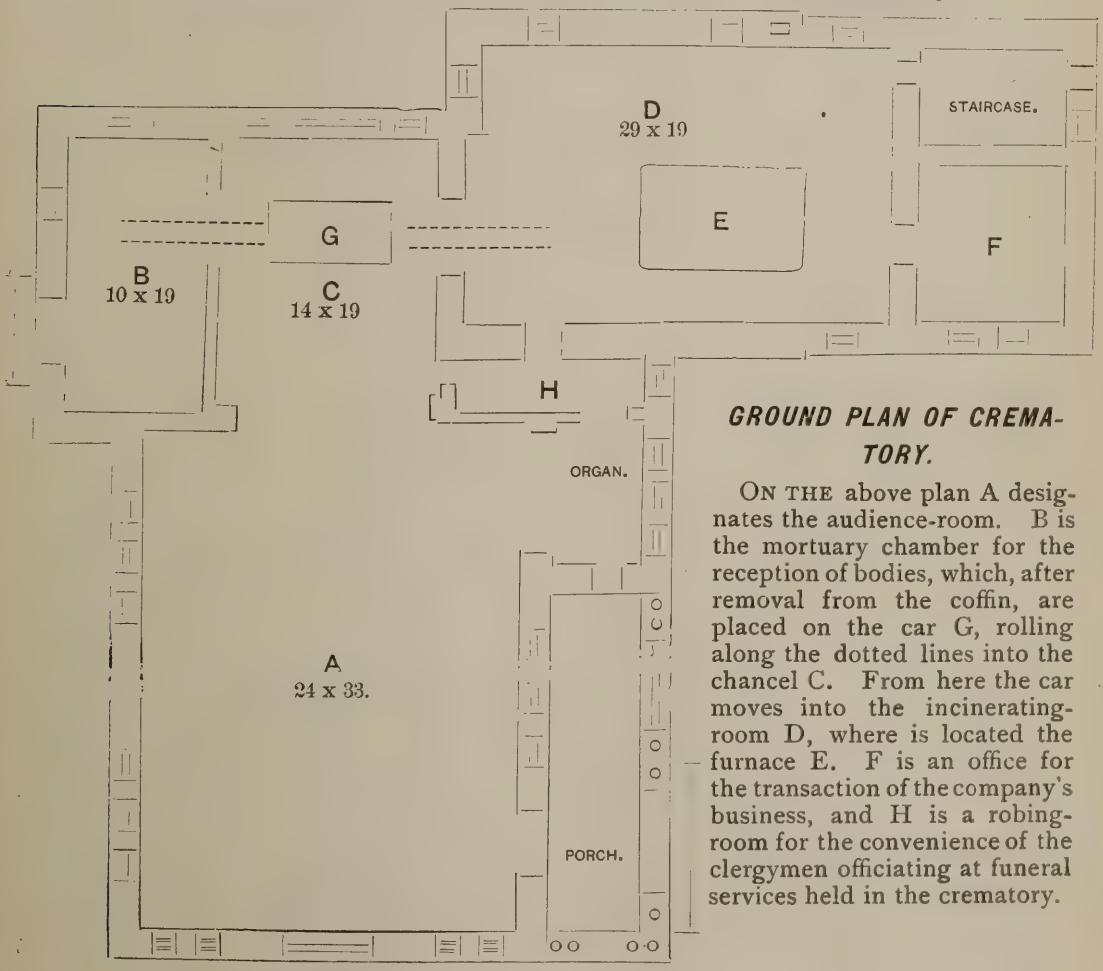
"The grounds of the company will be entered from Delevan avenue by a spacious roadway running to the porch, shown on the plan, and then passing around the building to the door of the mortuary chamber on the east side. Those who accompany the body will alight at the porch and pass thence into the auditorium. The body itself will be removed from the hearse at the door of the mortuary chamber.

"When the coffin containing the body is received in the mortuary chamber the body is removed and placed on the car which awaits its reception. The car is then moved by machinery and without noise into the chancel, where, if it is desired, the body may



THE BUFFALO CREMATORY TEMPLE.

(Now erecting on Delevan Avenue. Green & Wicks, Architects.)



GROUND PLAN OF CREMATORY.

ON THE above plan A designates the audience-room. B is the mortuary chamber for the reception of bodies, which, after removal from the coffin, are placed on the car G, rolling along the dotted lines into the chancel C. From here the car moves into the incinerating-room D, where is located the furnace E. F is an office for the transaction of the company's business, and H is a robing-room for the convenience of the clergymen officiating at funeral services held in the crematory.

remain in sight of those in the auditorium during the progress of such service as the friends and relatives may wish to have performed. At the proper time the same mechanism moves the car noiselessly behind the curtain which cuts off the incinerating room from the sight of the audience. The chancel will be provided with a lecturn and such other furniture as is necessary for the proper performance of religious ceremonies. The auditorium will contain an organ, so that all the features of a church funeral can be duly carried out.

"With this arrangement of the building, and with the appliances which go with the furnace, all that will be seen from the auditorium will be the appearance of the body on the catafalque at the back of the chancel and its removal from view at such moment as is designated by those in charge of the service. The actual introduction of the body into the furnace, which is accomplished without removing it from its position on the catafalque, will be seen only by those in charge of the furnace, and by such person or persons as may be designated by the friends of the deceased.

"The building itself will be some 70 feet in width by 60 feet deep. The construction throughout will be of the most substantial character. The lot will be graded and seeded, and trees and shrubs will be planted, so that the appearance of the temple and its surroundings will be most pleasing to the eye. The interior will be decorated tastefully, and it is proposed to make the temple, in all its details, anything but an unattractive place. The entire capital stock of the company has been taken up, and there are enough additional subscriptions to warrant its promoters in increasing the amount to $15,000."—*Buffalo Express, Oct. 25.*

Every physician ought to be the friend of this enterprise; many of the profession in Buffalo have signified their active interest in it by subscribing liberally to its stock. Doubtless there are many others at greater or less distance who would feel inclined to contribute their mites to such a worthy purpose. If such there be, we shall be glad to either receive their subscriptions and turn them over to the treasurer, or else to put them in direct communication with the proper officers.

The shares are placed at twenty-five dollars each. The furnace is to be completed and tested by December 1.

ANATOMICAL ANOMALY.

Dr. Palmer, of Batavia, sends us a note concerning a skeleton now in his possession. It is that of a Spanish woman of some twenty-five years, and presents the anomaly of having but eleven ribs on either side; greatest chest circumference, twenty-six inches; the shortest rib is five inches in length. There were no facets for the twelfth rib. No other anomalies. Such specimens are by no means unique, though always rare.

He also reports the case of a man dying in three days of epistaxis, from whose gall-bladder thirty gall-stones were removed; the largest, three-quarters of an inch in length and diameter, was found to be plugging the duct. The patient bled from nose, ears and mouth before he died.

Foreign Correspondence.

LETTER FROM WÜRZBURG.

A Sketch of the History of the Medical Department of the University.—Extensive Resection of the Intestine for Gangrene Following Strangulated Hernia.

Würzburg, Oct. 10.

Editor of the Medical Press:

Since writing you last I have been able to unearth some—to me—very interesting articles setting forth at length the history of the Medical Department here. My last letter was not intended to be historical to any extent, and so I have thought it worth while to try to show the development of a great and unexcelled medical school from small beginnings. The history of the progress of medical learning here is but one section of the history of its advancement elsewhere; nevertheless, it is so illustrative that it is well worth giving.

The University of Würzburg was founded in 1582 by the Prince-Bishop (Fürstbischof), Julius Echter, of Mespelbrunn; its medico-scientific department was at first designed to employ two, or at most three, professors. One for the practice of medicine; one for the theory; and, in case a third was appointed, his work was to combine the instruction of surgery *and botany.*

The course comprised three years. The surgery of the first year was devoted to the subject of tumors according to the teachings of Galen; the second year to ulcers and wounds according to Galen and Hippocrates; the third year to fractures and dislocations.

Until 1694 further information in regard to the university is very scanty; there remain only a few catalogues, matriculation books, thirty-three theses, and some works of Posthius, Adrianus Romanus, Schott and Kircher, teachers at the university.

During the 17th century, Galen and Hippocrates continued to be the authorities in medicine at this university, and their works were the text-books. A revolving table was in use during the anatomical demonstrations.

Although the number of professors had been increased, the buildings and lecture-rooms enlarged and a botanical garden established, the medical department did not prosper, but gradually retrograded until its abolition was almost necessitated on account of the paucity of students.

In 1749, at a trial of a sorceress, all the professors of the university were put upon the stand and testified to their firm belief in witchcraft.

This spirit of conservatism and lack of enterprise continued until the middle of the 18th century; when, happily for the welfare of the university, a Fürstbischof ruled, whose personal attention was directed toward the advancement of medicine.

As, up to this time, only Catholics were allowed to attend the university, the more was the surprise when a professorship was offered to a Protestant, the distinguished anatomist and surgeon, Lorenz Heister, of Helmstadt. An annual salary of $800, at that time an enormous sum, a certain quantity of wine and cereals, and several titles, were to be his pay; but, though it was stipulated that the freedom of his religious opinions should not be interfered with, he could not be induced to accept the position. Still, this overture to a Protestant had the effect of attracting Protestant students, who were finally allowed to graduate, in 1776.

In 1760, C. Siebold came to the university as a student of medicine, and, on account of his talents, soon attracted the attention of the Fürstbischof, who thereupon had him educated at his expense. He was sent for four years to England and France. W. Hunter, Cheselden, Mackenzie, Sabatier, Petit, Levret, Moreau, Albin and Gaub are recorded as his teachers.

He returned to Würzburg in 1766 and immediately began to lecture, and soon received the professorship of anatomy, surgery and obstetrics; but, interesting to note, he first received his title of *Doctor Medicinæ et Chirugiæ*, *after* his elevation to a professorship.

To this one man the rapid progress of the college is due. Regular courses in dissecting, operative surgery on the cadaver, and clinical surgery were established. The hospital was enlarged and a new operating-room was built. The anatomical museum received many additions. Obstetrics, botany and pharmaceutical chemistry were made independent chairs. Clinical *post-mortems* were occasionally held and anatomical material was abundant.

In 1792, lectures on "Embryologia Physiologico-Obstetrica"

were given, and in 1798 there were lectures on pathological anatomy.

The clinical school was endowed with such able teachers as the elder Siebold and his three sons—Christian, Barthel and Elias, and Thomann and Wilhelm, while at different times the following celebrated teachers held chairs at the university:

Cajetan v. Textor (surgeon)	1816–1861
M. Jaeger	1833–1835
Nicolaus Friedreich	1806–1819
Lucas Schoenlein	1819–1833
v. Markus	1833–1863
D'Outrepont (obstetrician)	1816–1846
Kiwisch (obstetrician)	1846–1852

Döllinger, next to Siebold the most important factor in the development of the university, was a student of Barth, Prochasca and Antonio Scarpa, and was noted for his fine anatomical preparations and injections. He worked especially in comparative anatomy and embryology, and made much use of the microscope. C. Pander and von Baer were his students, both of whom are celebrated embryologists, particularly the latter, whose text-book, although now somewhat antiquated, is still recommended to be studied by all who care for the science. Döllinger went to Munich in 1824 and was succeeded at Würzburg by Heusinger, also a celebrated anatomist and embryologist. Heusinger was called to Marburg in 1829. His place at Würzburg was filled by Muenz from 1829 to 1849. Muenz was an anatomist of the old school and paid little attention to embryology. He was celebrated for fine anatomical preparations and finished lectures. He made very numerous additions to the museum.

The elder Hesselbach was prosector until his death in 1816. His son, who succeeded him, held the position until 1828. The latter compiled the first printed catalogue of the anatomical museum, which contained 1,351 specimens, in 1819.

In 1842, B. Mohr was instituted the first regular professor of pathological anatomy, which position he held until his death in 1849.

In 1838, Bernhard Heine was appointed *Professor Honorarius* of Surgery. He received the first prize from the Academy of Paris on account of his experiments on the regeneration of bone, the specimens of which still exist and are among the most interesting in the anatomical museum. Two years previously he had also received the first prize from the same academy on account of his discovery of the osteotom. He died in 1846.

Since then the university authorities have lost no opportunity of making improvements, so that it may now be considered one of the best-equipped universities of Germany. Its only disadvantage lies in its situation, as a small town like Würzburg cannot compete in abundance of clinical material with the hospitals of Berlin, Munich or Leipzig.

Nearly 700 students attended the university during the last spring semester. Particularly its pathological school has earned a reputation. Among the celebrated men who have acted as assistants or teachers, may be mentioned the world-renowned pathologists, Virchow, Förster, Rindfleisch, Recklinghausen and Ziegler; such physicians as Bamberger and Gerhardt; such obstetricians as Scanzoni; surgeons like Linhardt, Bergmann, Maas; and, besides these, such well-known teachers in various branches as Köllicker, Tröltsch, Nelz, Rosbach, Köster, Hasse, Semper, Kundt, Rinecke, and numerous others whom I will not name.

But possibly university history may be less interesting matter for some readers than accounts of cases; so I will close with the account of a patient brought into the surgical wards the other day. The patient (male) had a strangulated inguinal hernia of only ten hours duration. The assistant, Dr. Middledorpf, operated, found the gut gangrenous, and was compelled to resect *one hundred and sixty* centimetres of it. The testicle was also gangrenous and had to be likewise excised. Death ensued ten hours after the operation. *Post-mortem* examination showed that not all the gangrenous intestine had been removed, and consequently sutures had given away with occurrence of fæcal extravasation into the peritoneal cavity, peritonitis and hemorrhage.

Sincerely yours,

OTTO L. SCHMIDT, M. D.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, October 6.

Reported by Charles G. Steele.

Dr. Charles G. Stockton in the chair. Dr. C. C. Frederick read a paper on "Epithelioma of the Cervix Complicating Labor." He gave an account of a case which he had encountered in his own practice, and also quoted from the literature on the subject. When he examined his patient he found the os thick, hard, ragged and nodular to the touch. The head was presenting in the first position. There was an offensive odor in the room, and on withdrawing his fingers, they were covered with blood, fetid muco-pus, and shreds of broken-down tissue. Dr. Frederick ascertained that, previous to conception and ever since, the woman had a bloody and at times

purulent, fetid discharge. A second examination showed the growth to be confined to the anterior and posterior portions of the cervix. After a few hours a Barnes dilator was introduced, and the os considerably dilated. When the largest Barnes dilator became ineffectual, a small-sized colpeurynter was introduced. Dr. Frederick had almost decided to employ mechanical means to effect delivery, when several hard pains succeeded each other, and the head, which had been in the superior strait, came well down into the pelvis. A small child was soon born. After delivery of the placenta, the uterine cavity was irrigated with a 1-2000 solution of corrosive sublimate. Quite a number of large shreds came away from the cervix during a few days following the labor. There had been some fever following the labor.

Under the head of discussion, Dr. W. W. Potter said the treatment had been the best that could have been adopted. He thought the sublimate solution had been too strong. Dr. Grosvenor was of the opinion that the removal of the diseased tissue had better be deferred until the latter months of pregnancy; as re-occurrence might be avoided, and the cicatrix formed after the operation would be less indurated. Dr. Bartlett had never seen a case similar to the one reported, in an obstetric practice of twenty-five years. He would not recommend opium to protract a labor, as in the majority of cases he found that the drug increased the pains. It is a good remedy for nervous irritability in labor. Dr. Van Peyma said it was difficult to diagnose these cases. Dr. Mary Moody asked the color of the cervix, the time that elapsed between delivery and the beginning of the fever, and the amount of tissue lost. Dr. Stockton mentioned a case which had occurred in Brooklyn, in which Cæsarian section was performed. In closing the discussion Dr. Frederick said that the os was red in color, and shreds of sphacelated tissue were hanging from it. The fever came on the second day.

Dr. Roswell Park reported a case of lipoma of the tunica vaginalis, which he had removed. The patient, a German, aged about 45 years, had noticed an almost painless, slow enlargement of the right testicle for about one and a half years. It gave trouble to him only by its weight and size.

Dr. Park diagnosed it as a tumor of the testicle, with possibly a collection of fluid within the tunica vaginalis. Upon incision, a lipomatous mass was found, with which the testicle was blended. It was removed, along with the testicle. Both together weighed exactly three pounds. It was not an omental hernia, as Dr. Park took particular pains to identify. Large vessels ran into it from the cord. Small accumulations of fat are not infrequently found in this situation, but a tumor of this size, and especially in this location, is seldom or never seen. The tumor was a true lipoma.

Dr. Bartlett reported a case of a night-watchman who was attacked with headache and fever. This continued three weeks, when he had well-marked typhoid fever. His wife, who had just been confined, and his brother, were taken with the same disease. The doctor could find no cause about the house or grounds which could have produced the disease. He thought the case showed that typhoid fever is directly infectious or contagious.

Book Reviews.

A Practical Treatise on the Diseases of the Ear, Including a Sketch of Aural Anatomy and Physiology. By D. B. St. John Roosa, M. D., LL. D. Sixth edition, revised and enlarged. New York: William Wood & Co. 1885.

In this handsome volume of more than seven hundred pages, Dr. Roosa has given to the American medical profession the most complete practical treatise on the diseases of the ear which has yet been published in the English language, or in any language so far as we know. It is only necessary to compare this with the translation of von Tröltsch's lectures by the same author, published in 1869, to learn how great has been the advance in the knowledge of otology during the past sixteen years.

The directions for examining the ear are full and explicit, and the information which the proper use of the tuning-fork gives is set forth very clearly. Twenty pages are given to "inspissated cerumen," and we are glad to see that the author crystalizes the idea, which must have occurred to every one who has seen much of ear disease, into the explicit statement: "I am convinced that the

hardening of the cerumen is merely one of the symptoms of aural inflammation." The directions to use the syringe as the ordinary means of removing cerumen are very wise. The results may not be quite so speedy or brilliant as from the use of curette, etc., in the hands of skillful operators, but they are just as sure, and ordinarily much more comfortable to the patient.

The chapters on affections of the middle ear are very complete and occupy the greater part of the book. The author lays great stress upon the importance of an early recognition of acute inflammations of the middle ear and the use of vigorous measures for their relief. His statement that the otologist's means of combatting inflammation are no different from those at the command of any surgeon, truism as it is, should set the family practitioner to thinking, that if he makes his diagnosis early and uses the means for relief which are at hand in the great majority of cases, the disease will be checked before any real lesion has taken place. It does, however, seem to us that the importance of instituting the proper treatment at the very beginning of aural complications occurring in the course of the acute exanthemata, demands a separate chapter for its consideration, even at the cost of some repetition in a work so comprehensive as this.

In the chapter upon chronic non-suppurative inflammation of the middle ear, Dr. Roosa marks the distinction between the catarrhal and proliferous forms with great distinctness, and his italicised statement, that "you will cure no cases of chronic proliferous inflammation of the middle ear," will prevent bitter disappointment for many enthusiastic young otologists who hope to relieve every case of deafness which they treat; besides bringing consolation to those of us who have seen such cases grow steadily worse in spite of all our endeavors.

The chapters upon diseases of the internal ear contain a full exposition of the present knowledge of this very intricate subject. We may hope that the assiduous, painstaking work of Dr. Roosa and others in this direction will soon lead to a more satisfactory therapeutics.

F. A.

THE MEDICAL ANNUAL, AND PRACTITIONER'S INDEX, FOR 1884–5. pp. 371. London: Henry Kimpton.

This reference-book opens with a summary of medical and scientific progress of the previous year. This is followed by hints on dealing with cases of insanity, and by sanitary memoranda. Next come a few notes on bandaging, dealing with the simplest possible expedients, and a dose index. Under the title of Medical Education, is given a full account of each hospital and teaching school, not only in London but Great Britain, their degrees, clinic hours, rules for admission of internes, etc. Then a brief account of British and foreign health resorts, in alphabetical order. Next, the purpose and meeting-place of the medical societies of London. A brief notice of some of the inventions of the year is placed next. Besides these a series of test-types, a list of the new books of the year, a directory of London dispensaries, and a medical gazetteer of all British towns containing hospitals or dispensaries, with information as to their status, capacity, and all points of interest; a trade directory of London and a list of British scientific and medical periodicals—and we have a volume replete with the facts which are sometimes so hard to obtain.

No equally comprehensive hand-book is published in this country: should such ever be contemplated, Kimpton's Annual would serve as a most admirable model.

A PRACTICAL TREATISE ON MASSAGE. By Douglas Graham, M. D. pp. 286. New York: Wm. Wood & Co. 1884.

Nearly every medical man thinks well of massage, a great many recommend it, but few have more than a general idea of what they are prescribing in advising it, and but very few could show a would-be learner how to practice it. To every one, then, this work by Dr. Graham will appeal, even by title, and still more when carefully studied; while the happy owner of a large library will find in it nothing on this subject to compare with it in practical value. A history of massage naturally fills the opening pages; to this succeeds the chapter which will find the most readers,—that on the mode of applying it. Perusal of it will convince the novice that the art is not to be learned in few lessons, while those who have been resort-

ing to clumsy methods may learn from it how materially their own labors may be, at the same time, lightened and made more effective. The remainder of the work is devoted to the physiological effects of massage, and its varied applicability to widely various affections.

Dr. Graham has produced a book which the profession should most cordially welcome, since they will find it of the greatest practical value.

THE PEDIGREE OF DISEASE. By Jonathan Hutchinson, F. R. S. pp. 113. New York: Wm. Wood & Co. 1885.

Anything that Mr. Hutchinson writes is worth reading, and these six lectures on Temperament, Idiosyncracy and Diathesis are only another conspicuous illustration of this fact. They comprise most careful and suggestive studies of those features which the unsuccessful and simply *lucky* practitioner neglects, but which the careful and studious observer judiciously notes. He makes large use of what he happily terms "revealing symptoms," and of certain others which he calls "retrospective symptoms," meaning thereby "not that which is to come, nor even that which is present, but rather that which is past,"—all of which has very often a most important bearing on a given case. Altogether the book is an admirable example of the benefit of scrutinous study of apparently little things, and of legitimate inductive reasoning therefrom. It is one which we can most cordially commend to every one, whether specialist or general practitioner.

NURSERY HYGIENE. By Boyd Bennett Joll, M. B. pp. 109. London: Henry Kimpton. 1884.

As the author truly says in his preface: "There are scores of such books,—on 'Advice to a Wife,' 'Hints to Mothers,' etc.,—all more or less bearing on the subject of the rearing of young children, but not many on the special lines I have followed,—those of sanitary or preventive medicine." It is this latter feature, especially, which makes this little work valuable to the laity,—for whom it was particularly written, and for whose benefit all technicalities have been omitted. Among other subjects dealt with, are the following: Dangerous Toys, Choice of a Wet-Nurse, Diet of Infants,

Diet of Children, Impurities in Milk and their Detection, Exercise Indoors and Outdoors, Washing Children, Preventable Diseases of Children, Disinfectants and their Uses, Dentition, Domestic Drugging, etc.

Altogether it is a valuable work for parents.

EPITOME OF DISEASES OF THE SKIN. By L. A. Duhring, M. D. 16mo., pp. 130. Philadelphia: J. B. Lippincott & Co. 1885.

This little work comprises a course of sixteen lectures given at the University of Pennsylvania, published in the *Medical News*, and now republished in the form of a manual. Dr. Duhring has furnished the American profession with its best treatise on dermatology, and this little epitome will be found useful by those who appreciate this fact and desire *multum in parvo*. It is worth studying for its classification.

J. H. CHAMBERS & Co., of St. Louis, announce as in press a Treatise on Diphtheria, including Croup and Tracheotomy, by Dr. A. Sauné, translated by Dr. H. Z. Gill. It is a work of considerable importance, and its appearance is awaited with some interest.

BOOKS RECEIVED.

From Henry Kimpton, London:
The Medical Annual and Practitioner's Index, 1885.
Nursery Hygiene: JOLL.

From Wm. Wood & Co., New York:
The Pedigree of Disease: HUTCHINSON.
Epilepsy and Chronic Convulsive Diseases: GOWERS.
Reference Hand-book of the Medical Sciences. Vol. I.

From J. B. Lippincott & Co., Philadelphia:
Epitome of Diseases of the Skin: DUHRING.

From Blakiston, Son & Co., Philadelphia:
Physicians' Visiting List, 1886.

NOTICE.

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AMPUTATION OF ARM WITH REMOVAL OF SCAPULA AND TWO-THIRDS OF THE CLAVICLE.---RECOVERY.

By Ernst Schmidt, M. D., Chicago, Ill.
Senior Surgeon to the Michael Reese Hospital.

July 28, 1885, Arthur Gollhardt, seven years of age, sustained a severe railroad injury, and on admission to the hospital presented the following lesions: Compound, comminuted fracture of left radius and ulna; most extensive laceration at the left shoulder, the head of the humerus being torn from the glenoid cavity, the arm hanging only by the brachial plexus and some strips of skin; compound, comminuted fracture of left clavicle near its middle; compound, comminuted fracture of left scapula, the line of fracture running behind the acromion and coracoid processes and across the spine of the scapula, with two longitudinal fractures of the same bone. The ribs were widely exposed anteriorly, laterally and posteriorly. Beside all these lesions about the left shoulder there were mangling and comminution of second, third and fourth right metacarpal bones and their fingers, an extensive palmar flesh-wound, and a deep wound through the whole length of the right thumb.

With the assistance of Drs. Kuh, Collins and Frankenthal I removed the shattered arm, dissected away the entire scapula, and removed the outer two-thirds of the clavicle; removed also various

shreds of tissues, nerves, etc., which were hanging loose, and was able to save enough of the integument to make at least a temporary

cover for this most extensive wound. Irrigation with sublimate solution was freely made. Attention was then paid to the other hand, from which the injured fingers and metacarpals were removed

nearly at the proximal ends of the latter, and the other flesh-wounds were sewn up. There was sufficient uninjured skin about the hand to cover over this peculiarly shaped manual stump very neatly.

During this protracted operation collapse was extreme; ether narcosis had been begun but had to be discontinued long before operation was completed; in fact, operative procedures were several times interrupted, since death seemed so imminent. No one present expected the patient would survive.

Nevertheless recovery was perfect, and was only retarded by the inevitable consequences of such formidable lesions. A considerable portion of the integument about the injured shoulder had too little vitality to live, and separated after four or five days. Strictly antiseptic dressings were applied as the case required, at first of iodoform, and latter of boroglyceride. Sublimate solution was always employed for irrigation.

Reaction was remarkably slight, especially so considering his age. Only once did his temperature reach 102°F., and after the fifth day never exceeded 100.5°. Complete absence of pleuritic or pulmonary complications after such extensive denudation of the thorax must be ascribed to rigid antiseptic precautions.

The boy was discharged October 20, 1885, perfectly recovered, his appearance being as shown in the adjoining cut, with full use of his remaining thumb and little finger, able even to write his name with them.

While the almost appalling extent of the injuries in this case might justify more extensive report, the essential details have been given with sufficient exactness.

1828 Wabash Ave.

Two pathological curiosities have been recently shown in Philadelphia: One, a child of five, exhibiting total fœtal amputation of arms at elbows and legs at knees, can hop on the stumps of his legs at a great rate, and can cut paper with scissors.

The other, a premature birth, fœtus at the seventh month, with cleft of sternum and the heart, external to the body, projecting from with it; no cavity nor other malformation.

SOME DEDUCTIONS FROM GYNÆCOLOGICAL EXPERIENCE.

By Dr. H. W. Streeter.
Rochester, N. Y.

[Read before the Rochester Pathological Society, Sept. 10, 1885.]

OF METHODS OF EXAMINATION.

Little, and in most text-books no allusion is made to digital examination in the standing position. For ascertaining the normal position of the uterus during a large part of life, when its supports, both from above and below, are subjected to the greatest strain from gravity and muscular exercise, in walking, working, respiration, defecation, from pressure by impacted fæces, abnormal growths or collections of fluid, from corsets or skirts, or from changing the center of gravity by high-heeled shoes, this method is absolutely essential. In no other way can degree of displacement, or the influence of the predisposing or aggravating causes thereof, be appreciated. Fashionable heels, by throwing a woman on to her toes, produce unnatural tension of muscles, abdominal and spinal curvatures, displacements of the viscera, *only in the perpendicular attitude.* The aggravation of uterine troubles caused by long standing, excessive walking, dancing, jumping, skating, going up and down stairs, is well known, and equally well known is it that rest in the recumbent attitude is a most essential means of relief. It is passing strange, in view of these facts of daily observation, that so little importance apparently has been attached by writers to this method of examination. By comparing the results of examination in the erect and supine position, much more can be ascertained than by either alone. No examination can be said to be complete without the finger is introduced within the rectum, both on account of the greater sweep around and behind the uterus than from the vagina, and on account of the importance of discovering any abnormal condition of the rectum itself, which may, and often does, exist, as a very important and frequently overlooked factor in uterine diseases. The sense of touch per abdomen, vagina and rectum, is the most important of any one method of diagnosis. It is an art which can be developed to a very high degree of perfection, and can not be neglected with

impunity. It is well to bear in mind that great harm may be done by too vigorous exploration; that it is by delicacy and not force of touch that the condition is appreciated. Extreme gentleness is a marked characteristic of skillful operators, as brutal harshness is of bunglers. While the observation is being made by the optic extremity of the digit, a scheme should be kept in the mind's eye of the points to be noted, namely, the size, shape, contractility, smoothness or roughness, moisture, temperature and tenderness of the vagina; swelling, pain, erosion, laceration, shape and density, direction, ascent or descent of the os; anterior, lateral, or posterior deflection, mobility and size of the fundus; foci of cellulitis, abscess, hæmatocele, salpingitis, thickening of the broad ligaments, enlargement or prolapse of the ovaries; fibroid or other tumors, extra-uterine; stricture, hæmorrhoids, polypus or fissure of the rectum; impaction of fæces; distension of the bladder; sensitiveness of the uthera. System is essential to accuracy; want of system leads to errors in diagnosis and treatment wholly unnecessary to the practitioner of average intelligence.

OF THE SPECULUM.

None can compare with Sims' in ease and painlessness of introduction, the clear view of the vaginal cavity and the field for operation thereby afforded. This has done more to advance uterine surgery to the front rank than any other instrument. The only objection to its use will prove an insuperable barrier to its adoption in general practice, namely, the necessity of an assistant. The secret of its successful use consists in so arranging the posture of the patient that the anterior vaginal wall will fall forward, and it is due to want of sufficient care in securing this attitude that the instrument is often disappointing in the results obtained from attempts to use it. When a good view can not be obtained from position alone, it is necessary to depress the anterior vaginal wall. With an assistant this is readily done: single handed, it is effected, though less satisfactorily, by the modified Sims, with anterior or posterior attachment, or by putting the patient in the genu-pectoral position. Were it not for æsthetic reasons, the latter would be preferable to any other position. A perfect view is obtained with nothing obstructing the vision, the vagina being equally distended by the pres-

sure of the atmosphere, by elevating the posterior commissure by a short Sims, or in an emergency, by a spoon handle, or simply by two fingers. No other position gives so clear a field of vision or so great facility for packing the vagina or painting its walls; it requires no assistant for purposes of diagnosis or ordinary treatment and should always be resorted to when a satisfactory examination can not be made upon the side or back, or when the latter causes much discomfort. This is Bozeman's method of examining all his patients in the Woman's Hospital, although Sims' speculum in Sims' position is the ordinary mode of examination by the rest of the staff. In a great number of examinations witnessed there, I do not now remember any speculum except the Sims used, unless for some special purpose. Contusion by stretching or pressure of the vagina, uterus, and cellular tissue when in a state of chronic congestion, as is inevitable to a greater or less extent with any cylindrical or multi-valvular speculum with the woman in the supine position, certainly does no good and is liable to aggravate existing inflammation or excite it anew. With the Sims, if of suitable length and size, there is no need of causing any pain or irritation unless the parts are abnormally tender, and then much less than would be caused by the bivalve under similar conditions. Although the female genital tract is capable of enduring great abuse, yet it is a point worth keeping in mind how much harm we may do and how much we may prolong the sufferings of our patients by the very means we are employing in the conscientious endeavor to relieve them. The less irritation produced by the examination and treatment, the quicker, as a rule, will patients be relieved, and the fewer will be the unsatisfactory results.

OF THE SOUND.

While fully recognizing its value for ascertaining the mobility of the uterus, and the direction and depth of its canal in the differential diagnosis of pelvic affections, I believe it should never be used except when there is a plain, positive advantage to be derived therefrom, either in the way of diagnosis or treatment; never to satisfy the promptings of a useless curiosity. I heartily endorse the words of that king of all gynæcologists of whom a British reviewer said (and you know how chary the English are in according praise to Americans), that he had had the largest experience of any man who

ever lived or probably ever would live, such had been the peculiar circumstances by which Emmet had been favored. The uterine sound is to be handled simply as a probe, being introduced always with great care and delicacy of touch, with as light a hand as a surgeon would employ in probing a gunshot wound, and if pain or bleeding is caused by its use under ordinary circumstances, the result is to be attributed to faulty manipulation. Many a poor woman has had to suffer from the carelessness of her physician in overlook-looking a latent cellulitis, and endured years of bad health and often permanent sterility from this disease, rekindled by the unskillful use of the sound or probe, extending beyond the limits of the first attack.

In what percentage of cases in which the sound is used is it of any practical advantage? Does it do good as often as it does harm? The cavity of the uterus is a *sanctum sanctorum* within whose sacred precincts no ruthless stranger should be allowed to venture with impunity. It is doubtful whether any other organ of the body would have withstood a like amount of torture. Who can count the tears and agony of weary years which have been caused by the gouging, hacking, scraping and burning to which it has been subjected? The less the interior of the uterus is meddled with the better. "Unless a patient has suffered from bleeding directly due to the condition of the mucous membrane and has needed some prompt application of an astringent, I have not made an application above the internal os in any private hospital," says Emmet, "since 1879, and had for some time before abandoned the method in my office practice, and my views have since been carried out by my assistants in the Woman's Hospital. The result has been decidedly more satisfactory, with fewer relapses and a more rapid recovery in every case."

By what system of logic the wholesale practice of intra-uterine medication, as advised by some English practitioners, has been justified, is entirely beyond the comprehension of the writer. What is the meaning of these words of Dr. Playfair, before the British Medical Association? "Strong advocate though I be of intra-uterine medication, I earnestly hope it may never become a fashionable treatment; and should it do so," he adds, "I shudder to think of the consequences."

OF THE CAUSES OF UTERINE DISEASES.

The chief is the debilitating influence of civilized life. If the daughter of the nineteenth century is fortunate enough to escape the curse of some hereditary taint, she probably comes of parents who were subject to like enfeebling environments to which she is destined. Theorize and speculate as we may about the constitutional origin of diseases, we can not deny the familiar facts of daily observation; race horses are not the progeny of feeble, lifeless, soft-muscled sires; sticks of celery are not the product of light and air. Weakly parents naturally produce weakly children. From the cradle to the grave, every habit of civilized woman as a class tends to debility. As soon as they are born, the hot-house system commences: they are coddled in hot, close rooms and protected by a prodigality of apparel from the fresh air, as though it were poison. If not supplied with the fashionable artificial nourishment, very likely the natural has very little more strength-giving qualities. The years go by in superheated and, as far as possible, hermetically sealed houses, with as little open-air exercise as possible, from false notions of gentility. During school life, the nervous system is subjected to over-strain at an age when all the vital energies should be directed to developing the nutritive organization. Fashionable dissipation, late hours and suppers, loss of sleep, and rich, indigestible food are followed by exhaustion and deranged digestion. Insufficient protection of the body with suitable clothing, especially during the menstrual period, tight lacing and high-heeled shoes, the very prevalent custom of avoiding child-bearing,—all these and a thousand other causes, with constant unrealized, inevitable power, conspire to break down the mothers, sisters and daughters of the land, whose ancestors were probably as hardy a race of people as ever lived upon the face of the globe. Consider for a moment how radically different in almost every particular were the habits and surroundings of the sturdy pilgrim maids and matrons. Common sense needs no touch of science to illuminate the moral of the story of the physical degeneration of the American nation. The wonder is that the woman of to-day is no worse off. Supposing the sons had been reared subject to similar enervating influences as the daughters, how much strength and endurance would they have pos-

sessed with which to fight the battles of life? How much have they as it is, with all their hygienic advantages, over the other sex? In the poor, the opposite extreme to that which I have described, of poverty and overwork, leads by a different, though no less abnormal derangement of physiological processes, to the same deplorable result. I have heard mentioned in this city for the first time in my life, as the most common cause of uterine diseases, one which is directly at variance with the opinions of all authors with which I am acquainted, and strikingly contrary to the conclusions of my own observation. That cause is masturbation in females. Emmet says he has never met with a case of self-abuse in the adult woman which could not be traced to disease as the cause, rather than the effect. The sexual passion in the human female, as in all female animals, except at certain periods, is, as a rule, passive, and she submits to, rather than desires, the embrace of the male. As in the vegetable world, the object of the seed-sowing is the harvest, and only at certain seasons is the soil in proper condition for the reception and germination of the seed, so in the animal the physiological object of cohabitation is procreation of the species, and the desire therefor is strongest on the part of the female when the conditions for impregnation are most favorable. The most common cause, in my opinion, is miscarriage. Vaginal injections of cold water for the purpose of preventing conception, is a common one. The semen is claimed to be nature's remedy for relieving the congestion accruing during intercourse, and the use of the condom prolongs this congestion to a degree which, by its frequent repetition, becomes a permanent passive hyperæmia. Pressure from dress, disturbing the normal center of gravity and relation of parts, elevated heels, long hours of work on the feet, excessive dancing or skating, running the sewing-machine, all tend to produce a congestion of which the natural result is hyperplasia and displacement. Impacted fæces may accumulate to an enormous extent, even though there is a daily passage, seriously derange digestion and nutrition and obstruct the pelvic circulation by their mechanical pressure. This is one of the most serious, frequent, and frequently overlooked complications, and no satisfactory progress can be expected toward recovery under any treatment as long as this condition is allowed to remain. It deserves most

thorough investigation in every case. Inharmonious marriage relations are a very common cause, occasionally from unsatisfied passion on the part of the wife, leaving the utero-ovarian tissue in a state of chronic congestion; but generally from excessive demands on the part of the husband. Noeggerath's assertion that infection by a latent gleet is the chief cause of endometritis and salpingitis, has never been corroborated by sufficient evidence to warrant its acceptance.

The use of the forceps in labor is a frequent cause of lacerated perineum with its accompanying evils. No one would believe from comparative measurements of the vaginal outlet and of the fœtus that the former could by any possibility give exit to the latter. The process of childbirth must always continue to be one of the mysteries of nature, no matter how often it is witnessed. Gradual dilation of the genital canal is the most essential condition for the successful completion of labor. The picture of the perineum, stretched apparently to the utmost limit of endurance, and yet a few moments later stretched sufficiently more to permit the passage of the fœtal head, must ever be vivid in the physician's mind, and can not but impress him with a sense of how infinitely fine is the adjustment of the steps of this physiological phenomenon. If that adjustment is interfered with by so much as one moment's haste, by so much is the liability to rupture of the perineum increased.

Failure in treatment is principally due to an erroneous conception of the fundamental principles of gynæcological pathology. The text-book most widely read in this country for the last twenty years has whole chapters devoted to such titles as Leucorrhœa, Ulceration of the os, divided into six varieties, Functional diseases of the uterus, with five varieties of dysmenorrhœa,—Acute corporeal metritis, Acute cervical metritis, Chronic corporeal metritis, Chronic cervical metritis, Acute and chronic corporeal and cervical endometritis, stating that the body or neck of the uterus may be *alone* affected for years, in the one case the morbid process not coming down below the internum, and in the other not ascending above it, and that leucorrhœa may result in several other diseases. Elaborate differential diagnoses are made between these so-called diseases, between pelvic peritonitis and cellulitis, and between ver-

sions and flexions. Illustrations are given showing with geographical precision the limits of each condition named, as though a special fiat had been issued in regard to the uterus, saying, "Thus far shalt thou become inflamed and no farther; thus much shalt thou tip and no more, while the nature of thy derangement is classified under this or that heading." No such geometrical distinctions exist in nature, and these descriptions, more fine than wise, lead to exaggerated ideas of the importance of names, confusion in estimating the real state of affairs, and a blind empirical application of remedies for an imaginary disease. While these variously-named conditions, which are merely symptoms of an underlying causative condition, are each described with the profundity of pseudo-scientific verbiage, the true pathological predisposing condition is passed by with a few words, so far as there is indication that it is recognized at all. Years ago, Bennett, in the most notable work of the time on this subject, while insisting that inflammation is the *primum mobile* in uterine affections, and that from it follow as results, displacements, ulcerations, and affections of the appendages, and that menstrual troubles and leucorrhœa are merely symptoms of this morbid state, with a narrowness of comprehension that is inconceivable with his opportunities for observation adds, that in the vast majority of cases inflammatory action will be found to confine itself to the cervical canal and should be attacked in its habitat by strong caustics. It is not the local disease *per se*, but rather the local and general condition connected therewith, either as cause or effect, which deserves precedence.

This broad, deep comprehension of primary principles may be truly said to be the secret of success, and it is this, rather than any personal or manipulative skill, which constitutes the main difference in the management of cases.

Emmet strikes the key-note of what every man who has given the subject careful practical investigation must hail as a great gynæcological reform, in these graphic words: "We shall have made a great advance in solving the problem as to the true pathology of many supposed uterine diseases, when we seek for the cause outside of the uterine limits. For many years, I have been convinced of the truth that we have been misled by confounding cause and effect.

Inflammation of the neighboring connective tissue, of the pelvic veins and lymphatics, and the mechanical effects exerted by new growth not directly connected with the uterus, have indirectly brought about changes in the uterus which we have treated as the primary disease. We only recognize an effect expressed by increased or lessened secretion, by the seeming formation of new tissue, or a diminution of the old. The uterus being an erectile organ and surrounded by a mass of blood-vessels passing in every direction through the loose connective tissue of the pelvis, is directly affected by any increase or diminution in the neighboring circulation. We must appreciate the fact that in few other parts of the body have we such a network of vessels within the same extent of space. In consequence of the erectile character of the uterine tissue, these vessels in time become varicose or over-distended from continued obstruction to the circulation, and have almost incredible venous capacity. As a stream will saturate the ground and lose itself in a marsh, so will the circulation through the pelvic cellular tissue and in diseased conditions, become equally sluggish. In attempting after death to inject the vessels in the pelvis of a female who has long suffered from uterine disease, it will be found that the distinctive form of the veins is frequently lost at different points, and with all care the injection will become extravasated and diffused. With all due allowance for the supposition that rupture would be likely to occur from an injection unless extravasation would not take place during life, it has been proven that these veins become gradually stretched out of all form at various points and get to be mere receptacles. In this over-distended condition of the veins, their contractility is lost, and they are no longer able to return to the general circulation the same quantity of blood received by them from the capillaries."

The ætiology of lacerated cervix is an interesting and disputed subject, and one which is gradually assuming its true position as a factor in uterine diseases. While its importance has cerainly been over-estimated, as most novelties are apt to be, and while many a prolific matron with anæsthetic nerves and elastic pelvic circulation lives in the enjoyment of robust health and goes to her grave in the happy unconsciousness of being the possessor of a star-shaped os uteri, yet when the lips are everted and hypertrophied and ac-

companied by symptoms justly attributable thereto, the indication is plain and reasonable to bring those lips into their normal relation. The results of the operation in the hands of Emmet and his colleagues in the Woman's Hospital have been among the most brilliant in all surgery, producing a prompt and permanent disappearance, in thousands of cases which had resisted ordinary treatment, of all those symptoms which have truly been called by one of our number, "the torments of a pelvic hell."

The symptoms of affections of the female pelvic organs are so protean as to be incredible, did not the anatomy and physiology of the sympathetic nervous system in general, and especially in its relation to the genital organs, and the clinical evidence of our own daily experience and of observers in all parts of the world demonstrate, with undeniable scientific accuracy, that disturbance of these organs is capable of producing derangement of the functions of any or all parts of the body, and, on the other hand, that the constitutional condition, and that of any organ, has an omnipresent and potent influence over the circulation, nutrition and innervation of the pelvic tissue. I have heard men derisively scoff at the importance attached to gynæcological affections, and more than insinuate that they were exaggerated for mercenary motives, and a recent writer has even gone so far as to put in print the opinion that the chief reason was because the practice of gynæcology was *spicy*. These same men would attribute the symptoms to that organ which has been the cover for a vast amount of ignorance, the liver, or to functional derangement of the nervous system, as though action could be deranged without a corresponding derangement of machinery. Although the abnormal workings of the female economy are by no means to be studied solely through a speculum, and specialists may, and doubtless do, often override their hobbies, yet there is no excuse, in these days of practical scientific research, for such gratuitous assumptions, or for the sufferings which people are obliged to endure solely from the ignorance or neglect of those who claim to have the power of diagnosis without resort to physical examination.

The pathognomonic symptoms, when coexisting, would seem too clear to be mistaken, yet how often is vesical irritation from dis-

placement ascribed to the bladder itself, the backache to the kidneys, the reflex digestive derangement to the digestive organs *per se*, and the reflex cephalalgia treated by anti-neuralgics.

When only one or two of the usual symptoms exist, as, for instance, vertigo, pain in the pharynx or jaws, the always-tired feeling, nausea, or goneness in the stomach, the case becomes an interesting and often difficult question of differential diagnosis, to be decided only by an exhaustive process of exclusion. Nothing should be taken for granted; every organ should be systematically interrogated, and if the slightest doubt hangs over the diagnosis, the examination should be completed by investigating the condition of the pelvic organs. While the uterine examination should, when possible, be avoided, yet deeply culpable is he who will take upon himself the responsibilities of treatment without making use of every resource known to science for ascertaining the morbid condition with the utmost precision. There are often cases in which a uterine examination may result in marked and brilliant success, while the best-intended therapeutics, otherwise directed, could only result in dismal failure. If, through a false modesty or a foolish conceit, the patient declines an examination, the case should only be accepted (if at all) conditionally, with the distinct understanding that the physician is not to be held responsible for the results of his treatment any further than he has been allowed to establish for it a scientific basis.

OF TREATMENT.

No man can be a good gynæcologist unless he is a good general practitioner. Neither local nor constitutional treatment alone will be rewarded with success, however honestly and earnestly pursued, but when both are employed in unison with conscientious thoroughness and comprehensive intelligence, no class of cases, as a whole, yield more gratifying results.

While we must often fail in effecting radical permanent cures from physical obstacles which it is impossible for any treatment, no matter how skillful and persistent, to remove, yet the amount of suffering which may be relieved and kept in abeyance is so vast in its entirety as to be sufficient reward for our highest ambition, and is not excelled by the results obtained in any other specialty. The

great object of general treatment is to improve nutrition, and thereby, through the nervous and vascular systems, assist local treatment in restoring the normal tone of the pelvic circulation.

As preliminary to treatment, or rather as the first step, and one of primary importance in persons possessed of the nervous peculiarities which characterize diseases of women, a commanding personal influence should be acquired. Nerve power is lacking in many of these cases; they need a stronger will than their own to rely upon. If a feeling of dependence, confidence, not only in the physician's skill, but in his sincere sympathy and honest earnestness of purpose, can be inspired, deep and fixed in the patient's breast, at the outset, much more rapid progress will be made than by all other therapeutic resources, with this one omitted. Analogous though it be with the magic power of the clairvoyant and the faith cure, it is a means of inestimable value in relieving what may truly be termed the horrid sufferings of the victims of nervous debility, a term used for want of a better to describe the symptoms alluded to. It is an art, natural or acquired, worth more than any one talent to its possessor. Though used by the unscrupulous for purposes of deception and imposition, yet no article in the materia medica can be used by the conscientious scientific physician, which will produce results more positive and tangible, or be of so much assistance to other means employed. Without it the Esculapian Sampson is shorn of half his locks.

Regular systematic occupation of body and mind should be rigorously insisted upon. Idleness is enough to drive a well man into the slough of despond, and much more a nervous woman who has nothing to do but brood upon her miserable feelings and vainly seek relief in panaceas recommended by the newspapers or over-sanguine friends. They should be kept busy at something all the time, and not allowed to lie down any more than absolutely necessary. Exercise in the open air and sunlight should be taken, all that the strength and local condition allow—not at the patient's pleasure but as prescribed, at definite hours and for specified lengths of time, and in specified manner. In the absence of this, from forbidding circumstances or the patient's condition, passive exercise, in the form of general faradization and dry rubbing of the whole body for half

an hour, night and morning, or oftener, has a strengthening and sedative effect of marked value. Flannel underclothing should be worn, both because it is the best protection against changes of temperature, and because it creates a gentle stimulating effect upon the cutaneous circulation. Especially should the feet be kept warm, for chilling the feet is one of the most frequently observed exciting and aggravating causes of pelvic congestion. For a large proportion of the cases, diet should be eminently fattening. A teacupful of milk should be taken every two hours, and cod-liver oil three times daily until the inter-muscular spaces disappear from the features. Fat and nervousness have an antipathy which is very noticeable in these cases, although there are many exceptions to the rule, but it is a good rule to get and keep these cases fat. It is a royal nervine, bearing the imperial stamp and countersign of nature.

As there is no specific system of physiological chemistry regulating the uterine functions, so no uterine specific, local or constitutional, exists or can exist, except in the imagination of the credulous and the alluring advertisements of the manufacturer. It is no credit to a learned profession to become the tool of unscrupulous avarice, depleting the pockets and filling the stomachs and vaginas of confiding patients with conglomerations of preposterous pretensions. The more attention is paid to hygiene the less medical treatment will be required, and that little will be more effective. The less the better.

OF LOCAL TREATMENT.

The object is, or should be, to reduce passive congestion of the pelvic tissues and viscera, and the consequent hypertrophy and displacement connected therewith; to remove obstructions to the circulation, and to give tone and elasticity to the blood-vessels. Without this object is kept in view as the desired ultimatum, results will be inevitably disappointing in a large majority of cases. "As long as we continue," says Emmet, "to treat the recognized pathological changes in the uterus as the primary conditions, it will seem proper to apply agents directly, or as nearly as possible, to the parts involved. If, however, we appreciate the fact that some inflammatory change in the pelvic tissues, outside of the uterus, is existing or has existed in almost every instance of so-called uterine disease in

the non-puerperal state, we shall not attempt to treat the *effect* by agents introduced into the cavity of the uterus, without being prepared for recurring attacks of cellulitis, excited by our mode of practice, and not due to some accidental cause. If so-called ulceration of the cervix is accepted as a cause and not as an effect, the use of caustic applications is a consistent practice and should be persevered in until the surface is healed; but if it is held that the increased secretion is simply an effort of nature to relieve an obstructed venous circulation, and that the erosion is a surface from which the epithelium has been washed away by the discharge flowing over it, then such a course of treatment is deemed to be not only irrational, but most hurtful.

"Of course it is desirable to correct a retroversion, but I hold that it is not so much the position that is to be corrected, as it is the obstruction to the circulation in the organ which is to be removed. It is believed that in time professional opinion can be influenced to abandon intra-uterine medication, as one not founded upon sound views of pathology, and to recognize the different forms and shades of pelvic inflammation outside of the uterus, now usually overlooked, as constituting the chief factor in the diseases of women."

It was not my intention, even if time and your patience would allow, to enter into details of treatment, but merely to call attention to a principle applicable to every variety of uterine trouble which we are called upon to treat, a principle which is to the gynæcologist what the compass is to the mariner. Without it, he is afloat upon a troubled sea of uncertainty, blown hither and thither by every gale of prevailing empiricism, liable to wreck his fragile bark upon the hidden rocks of unforeseen therapeutical accidents; with it, his landmarks are clear, his course is plain, and he can safely guide his precious cargo of human life through the storms and over the waves, in the happy assurance that he is sailing in accordance with a chart draughted by science, endorsed by sound common sense, and verified by the most enlarged experience.

SOME POINTS CONCERNING THE TEETH AND THEIR PRESERVATION.

By Eli H. Long, M. D.
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[Read before the Physicians' Club.]

The physician, as a rule, pays very little attention to the teeth, beyond occasionally extracting one when obliged to, or making an application for toothache. This is complimentary to the dental profession, as acknowledging its resources and ability to take care of that branch of surgery. But we are at fault in not being posted and able to advise in regard to the teeth as we are in what relates to other specialties. Especially should we pay attention to whatever pertains to preserving the natural teeth, for there is too much needless extraction of teeth and insertion of artificial ones which, at best, are inferior substitutes. People do not appreciate the value of their teeth. The prevalent neglect of cleanliness and the indifference with which some people have their teeth extracted instead of having them filled are really surprising. If we will do a good work in preventive medicine, let us pay more regard to the teeth with the view of being better able to instruct and advise.

Cleanliness.—The most important means of preservation is cleanliness. Surprising as it may seem, there is not one person in a hundred who takes proper care of the teeth. Strict cleanliness requires, in addition to brushing once or twice daily, the use of waxed dental floss silk to be passed between each two adjacent teeth for the purpose of removing any particles of food that remain. This should be done once or twice daily, and it is really more important than brushing, for the teeth decay most readily upon their proximal surfaces. The cause of decay, as you are aware, is generally the reaction between acids, taken into the mouth or generated there by fermentation of food, and the earthy salts of the teeth. The outer and inner surfaces of the teeth seldom decay because exposed to the friction of the lips and tongue by which they are kept clean; but between the teeth particles of food and acid mucus collect and decompose, and make sad havoc before we are aware. The dentine

or inner part of the tooth decays more readily than the enamel that covers it, and thus it is that a tooth may have a cavity nearly encroaching upon the pulp without the enamel being broken through to a degree noticeable to a careless owner. To be sure, there must be an imperfection in the enamel that allows the corrosive access to the dentine, but this may be slight as in the crevices on the grinding surface of the tooth, or at the neck where the enamel joins the cementum of the fang. This decay upon the proximal surfaces can only be prevented by frequent, thorough removal of all matter from between the teeth, and this cannot be effectually done with the brush or tooth-pick.

Any one who will give five minutes daily to the use of the floss silk and brush will be rewarded with a beautiful appearance of the teeth, a feeling of cleanliness that is refreshing; and will be apt to discover any point of decay early. The dentist should be visited at least twice a year and he will discover any hidden decay. The tartar that collects upon the teeth near the openings of Steno's and Wharton's ducts is a natural deposit from the saliva. It should be prevented from collecting, by the occasional use of a dentifrice containing prepared chalk or other mild scouring substance. Tartar does not injure the teeth directly, but by collecting beneath the margins of the gums, its favorite place, it irritates them, inducing their absorption and also that of the alveolus forming the socket. Many teeth are lost by becoming loose from this cause.

Too little attention is given to the care of children's teeth. The temporary teeth should be kept as clean as possible to prevent early decay, and it is very important to have them filled when decayed, so as to preserve them until replaced by the permanent ones. The principal cause of irregularity of the permanent teeth is the premature loss of the corresponding milk-teeth. The latter are seldom irregularly arranged, and they generally occupy enough space for the ten anterior teeth that succeed them. But if some of them are lost several years before their successors are due, the latter may not be sufficiently developed to maintain the space necessary for their regular arrangement. Sometimes, however, irregularity is due to too long retention of the milk-teeth. Here, usually, the fang has not been absorbed to an extent sufficient to loosen the tooth, and

unless it is removed, the successor must emerge out of its natural position. Either cause demands in addition to cleanliness, that the milk-teeth should be frequently inspected by the dentist or physician.

Second Dentition.—Second dentition commences at six or seven years with the eruption of the first or six-year molars behind the last milk-teeth in each jaw. This occurs before any milk-teeth are lost, and for this reason people commonly suppose these to be milk-teeth; and they are greatly surprised when, going later to have them extracted because of toothache from neglect, they are told that they will never be replaced.

After the appearance of these, the incisors soon loosen and give place to the permanent ones. The next to be lost are the temporary molars, the anterior ones first, and these are replaced by the bicuspids, and lastly the canines give place to their successors. Thus at twelve years the milk-teeth have all been replaced by permanent ones. At thirteen years the second molars appear, and at from eighteen to twenty-five the third molars or wisdom-teeth, which complete dentition. A word here about the wisdom-teeth. They are generally supposed to be of little account, and consequently allowed to decay and are soon lost. This supposition is hardly true, although they are situated far back in the mouth, and do not have space to develop properly. However, when a first molar has been lost early its space is utilized by the developing wisdom-tooth which crowds the second molar forward so as to nearly or quite close up the vacant space. By this means the wisdom-tooth gains space and becomes as perfect and useful a tooth as any. Also, when a first molar is lost later in life, the usefulness of that side of the jaw would be greatly compromised by the absence of the wisdom-tooth. Therefore the wisdom-teeth should be cared for, for they may be needed.

Irregularity.—Many cases of irregularity exist. In some it might have been avoided, in others probably not. Because of their unsightly appearance and their greater liability to decay owing to the difficulty of keeping them clean, the question of correcting them comes up for consideration.

It must be decided in view of the degree of irregularity, the age of the owner and his willingness to submit to an inconvenient and

sometimes long process of correction. Most cases can be corrected if taken at the proper age, which is usually as soon as the irregularity shows itself. The older the patient the more difficult will correction be, and after the age of twenty success is doubtful. Sometimes all that is necessary is to remove the deviating tooth itself, or a less important one which disputes the space with it. If the canine is crowded partially out of its place by the first bicuspid which appears earlier, the latter should be extracted in preference to the former as being of less importance. The canine is a stronger tooth and it occupies a prominent place in the dental arch, contributing greatly to its strength and beauty, and as well to the expression of the face. When the front teeth are crowded and irregular it may be necessary to make space by removing the second bicuspids, and then by proper appliances to gradually pull the teeth backward into their proper relative positions. The teeth in childhood are very susceptible of such movement, and sometimes as many as half a dozen are moved fully the space of their individual diameter. Ligatures, rubber plates, metallic bands, rubber bands and wedges are some of the appliances used, no one kind being suitable for all cases. A constant pressure upon a tooth in one direction induces absorption of the socket in that direction, and the space left behind the fang is filled up with new bone, so that the process is virtually a moving of the socket.

The antagonizing teeth of the other jaw may help or hinder the process according to their relation to the teeth to be moved. If they hinder, filing may be called for or separation of the jaws by a metallic or rubber block between the teeth. Of course marked cases of irregularity will be referred to the dentist, but the physician can often direct the parents how to care for the lesser cases. Some will require only a careful supervision of second dentition to avoid or correct deviation. Removal of a temporary tooth that has been retained too long, and subsequent occasional pressure upon the deviated tooth in the right direction, will often insure correction. Toothache in a milk-tooth that has decayed early and is too far gone to be successfully filled, should be controlled by anodyne applications, if possible, until the time for removal. Above all, the

teeth should be cared for to prevent early loss, and when irregularity exists it should be corrected early.

Toothache.—With such a simple matter as toothache some skill in diagnosis is required to give the patient the best advice; for there are different kinds of toothache representing different conditions of a tooth, and requiring different treatment.

It would be unwise to extract every aching tooth, and on the contrary every aching tooth cannot be successfully filled. Teeth should always be filled before they commence to ache. When a tooth really aches for the first time it shows that the cavity of decay is near enough to the pulp to allow of irritation by external influences; and after repeated aches the pulp will be found to be diseased or dead. But although the pulp may be dead the toothache will recur time and again. This fact overthrows the popular notion that "killing the nerve" will put an end to toothache. While it is true that in the early stage of decay it is the nerves of the pulp that ache, in most cases of toothache and always when the tooth is "ulcerated," the nerve is dead, or nearly so. The toothache here is a periostitis, or more specifically a periodontitis, which is caused by the presence of the dead or diseased pulp.

The diagnosis of the true condition will rest upon the history and present condition. When the decay is not extensive and the patient says the tooth never gave any trouble until very recently, and now only slight or occasional, or that it aches only when irritated by cold or heat, the pulp probably is not diseased. On the other hand, if the history shows that the tooth has ached repeatedly, or even once, with a heavy, throbbing pain for a number of hours continuously, or if the tooth is "ulcerated," the probability is that the pulp is either dead or diseased beyond recovery. The diagnosis may now be rendered positive by determining whether the inside of the tooth is still sensitive, and whether the periosteum surrounding the fang is painfully sensitive to pressure. Every physician should have several dental excavators on hand, for he will find them useful instruments for various purposes. If scraping the dentine with one of these causes pain, and at the same time there is no pain upon tapping the tooth smartly in the direction of the fang, you may be sure that the pulp is living and the tooth may be filled. But if the

tooth is not sensitive inside and there is marked tenderness of the periosteum as shown by percussion or closing the jaws, then the pulp is dead. The periosteum is inflamed and thickened, by which the tooth is slightly elevated in its socket so that it is the first to strike its antagonist when the jaws are closed. When the dentine is sensitive and periodontitis also exists, it shows that the pulp is still sensitive but affected sufficiently to be an exciting cause of periodontitis. Experience has proved that when the pulp is dead, the tooth should not be filled without first removing all matter from the pulp cavity and canal, cleansing them thoroughly, and filling them. But when this is carefully done so as to remove the irritating cause, and the crown cavity filled, the tooth may remain serviceable and free from ache for many years. If the pulp is diseased it should be destroyed, after which the tooth should be treated as above. This method is constantly employed by all accomplished dentists and it does not leave the tooth entirely dead. The interior that was nourished by the pulp is dead, but the fang is connected to the alveolus by the interposed periosteum which nourishes the cementum of the fang and maintains life in it; otherwise the tooth would act as a foreign body. If such a tooth has been "ulcerated," this trouble usually disappears after the above treatment, especially if it is treated through its external opening.

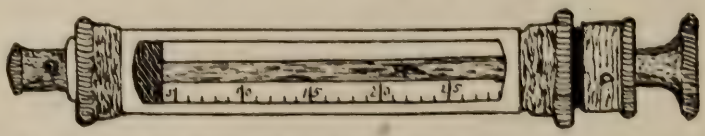
Remarkable progress has been made in dental practice in regard to saving this class of teeth, which formerly were extracted without ceremony. This treatment will not apply to all teeth, for some of the back ones are so situated that it is impossible to thoroughly cleanse and fill all of the fangs, without which success is doubtful; but there is no excuse for the loss of any tooth anterior to the molars as long as there is crown enough left to bear filling. It may be remarked that the present generation have very poor teeth. This is true. With the advance of civilization, or rather of bodily deterioration its usual accompaniment, the teeth suffer with the other organs. In fact, the mouth is a pretty good indicator of the innate constitution. The quality of the teeth and the appearance of the mucous membrane tell much in regard to the individual that may be of value to the observant physician. As an example of the close connection between the teeth and the constitutional vigor, we have

the characteristic teeth of inherited syphilis. Any plan for improving the quality of the teeth must be one that will apply to the whole system with a view of improving the constitution of each succeeding generation.

A NEW HYPODERMIC SYRINGE.

BY B. G. LONG, M. D.
Buffalo, N. Y.

HAVING had much trouble in keeping my hypodermic syringe from drying out, I devised the one shown in this illustration, which has given satisfaction. The piston-rod, *b*, instead of having a thread upon it for purposes of adjustment, is perfectly smooth, so that the packing contained in the box *a* fits tightly about it and prevents the



air from entering the barrel and drying the plunger, which is the case with ordinary syringes. At the opposite end a cap *c* screws on to the needle-nipple, pressing upon a washer, and makes the syringe air-tight. The cap last described is already in use upon many syringes. This simple device can be made by any instrument-maker.

A GUNSHOT WOUND OF THE LUMBAR VERTEBRÆ, WITH RECOVERY.

IT IS not so long since the occurrence of a case where the possibility of recovery after a gunshot wound of the lumbar vertebræ was discussed as a matter of international interest, that the subject has been forgotten. A renowned foreign surgeon—Esmarch—was by many taken seriously to task for uttering the belief that in this particular case the wound was not of necessity fatal, although he showed that similar wounds in many of the lower animals were recovered from. Recently a case has been reported by Albers (*Deutch. Militärzlch. Zeitschft.*), which must forever settle this question. It is, in other words, the first case of the kind recorded in surgical literature.

A man received a bullet wound during a duel, the ball, of large size, entering two centimeters above the right iliac crest. Hemorrhage was immediate and profuse. Thick wads of salicylic cotton were tightly bound on, and the bleeding thus checked. On the instant of reception of the wound, the man fell, half fainting, and motionless below the waist. He was carried nearly a mile to a conveyance, and then as much farther to a hospital. There ice was applied to the abdomen and morphine administered on account of pain. The next day he had a sharp attack of peritonitis, and urine was suppressed. After the sixth day, the peritoneal inflammation subsided, and now, on dressing the wound, it was found that a little pus escaped. Now, for the first time, the probe was used, and passed easily to third lumbar vertebra, where at a depth of three centimeters the ball was felt. On withdrawing the probe it met with an elastic resistance. It was therefore determined by the findings with the probe and by the general features of the case, that the bullet had passed between the coils of intestine, had pierced the third lumbar vertebra, entering the spinal canal between the bone and the cord, had passed out of the bone and had lodged in the soft tissues beyond. No effort was made to remove the ball; only a drainage tube was introduced.

This diagonosis was verified by return of power to urinate, and very gradual return of motility in the lower extremities, though only after months was the patient able to walk with a cane. Perfect recovery was only attained after three years and a half.

In view of the results thus gained, Dr. Albers emphasizes the necessity for special care as to the following points, when dealing with shot wounds of the spine:

1. Immediate hæmostasis for the preservation of life.
2. Transportation to the hospital soon as possible.
3. Prompt antiseptic occlusion with change of dressings as often as every day, if necessary. He prefers salicylic cotton.
4. Probing *only* in case there be suppuration, and then with a thick knobbed sound.
5. This probing should be most cautiously done, and should at the same time open up a path for drainage.
6. Isolation from other surgical or fever cases, with rigid precautions against bed sores.
7. The removal of the ball may be generally left to the extrusive effect of granulations, which may remove by degrees a heavy piece of lead.
8. Recovery from paralysis due to contusion of the cord is possible, even after a year.

The Medical Press

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BUFFALO, N. Y., JANUARY, 1886.

WITH the present number we begin our regular monthly issues, the first two numbers having been devoted to assertion of our aims and exhibition of our purpose. To our many new-made friends we hereby tender our expressions of gratitude for the kind words with which they have met us on every side, and our assurance that such expressions go far toward making the conduct of a journal a task fraught with pleasure. While we hold that its typographical appearance is scarcely susceptible of improvement, we are yet in position to assure our readers that the success it has already met with justifies us in adding to the number of pages at first allowed and in promising a more frequent recourse to the engraver's art than will be found in any similar journal in the land.

To our editorial *confrères* in various parts of the country who have, with such pleasant unanimity, commended our new enterprise, we desire also to express our appreciation and our thanks.

Our readers may expect to find in the various numbers of the ensuing year articles by gentlemen who have names familiar on two continents, and whose every written word is worth reading. Correspondents in various cities at home and abroad, will tell of what the days may bring forth. Clinical and other reports of cases of rare interest will be a conspicuous feature of the journal. In short, no effort will be spared to make THE MEDICAL PRESS in every respect attractive and valuable.

It is with pleasure that we announce the establishment of a London agency for The Medical Press, as will be seen upon the cover-page. Mr. S. Cecil Stanton will not only act as our business agent, but through his coöperation we shall be able to present to our readers literary matter of no small interest. We moreover take pleasure in recommending Mr. Stanton to our readers as a general business agent of known integrity, and of large opportunities, through whom they may order books, instruments, etc., *directly*, thus saving commissions of middle-men. His address is 17 Southampton Row, London, W. C.

* * *

We are desired by the Business Manager of The Medical Press Association to request that remittances be made to him by post-office money-order or postal-note, since there is a discount to be paid on all checks on country banks, and the subscription rate charged does not afford any margin for exchange. If a check is sent, fifteen cents should be added for exchange.

* * *

Since our first appearance a younger and vigorous rival has appeared in a sister city. We refer to the *Cleveland Medical Gazette*, which was first issued in 1859, and after a few years was discontinued. It has now been revived under the editorship of Dr. A. R. Baker, and promises to be a very live and readable periodical. Its paper and appearance as well as its reading-matter are good, and we wish it all the success it deserves.

WHO WRITE OUR TEXT-BOOKS?

There is food for reflection in the above query. It is one which few have ever stopped to ask themselves; yet it is one worthy of attention. Our text-books naturally belong in one or the other of two categories,—those by foreign authors and those which are of American origin. Of the former we have here nothing to say; it is concerning the latter that we suggest this query. And in answering it we have to say that peculiar and in a measure uncertain circumstances have brought it about that almost every text-book of Amer-

ican origin, no matter in what department, has emanated from either New York or Philadelphia. Is this because the chief medical publishing houses are located in these two cities, or are they to be found there because there are to be found the men whose works they print, or is it only coincidence that writers and publishers are so near each other? Leaving these, our two largest cities, aside for the moment, let us see if book-makers inhabit other parts of our country. Baltimore has furnished nothing that we know of which is in the broad sense a text-book, neither has New Orleans; yet these are old cities (relatively) and who shall say that they do not contain eminent talent? St. Louis and San Francisco have done but little better, and not quite as well as Chicago, though open to the same charge of "freshness." Chicago has produced at least three works within a few years, which give promise for the future. And yet the men like Bemiss and Smythe and Chaillé of New Orleans; Hodgen of St. Louis, and Brainard of Chicago, were giants in their days. To say that they were not "writers" is not enough; it is a statement of a fact, but not an explanation.

All activity in Washington is centered in the Army Medical Collections from which large stores of information are distributed elsewhere, though but little is utilized at home except among the conspicuous coterie of workers in the Surgeon-General's office.

Including, for the sake of argument, Brooklyn with New York, although remarkably quiet in this respect, we have only one other large city—Boston. If there is any one characteristic in which Boston claims supremacy it is in literary activity. Yet here we have a curiously anomalous condition; the city of boasted culture and education, the city in which the Warrens lived, and in which still live such confessedly accomplished men and eminent essayists as Holmes, Bigelow, Bowditch, Cheever, Blake, Storer, Fitz and others, has not produced a text-book which deserves the name! Is this Boston exclusiveness, or have other influences been at work? To carry the investigation of this subject to a satisfactory finish would consume more time and space than the matter deserves, and would be for our present purpose profitless. One may say, though, that Massachusetts hospitals appear to furnish sufficient material for keeping a weekly journal comfortably full of interesting matter, but they

seem to fail in affording sufficient clinical experience upon which to write a book, judging from the New York standard.

It cannot be native modesty nor distrust of native talent, because these features are no more conspicuously absent from the meetings of the Massachusetts State Society than from the meetings of the similar body in Pennsylvania. It can hardly be a Puritan way of showing contempt for the work of others and a disdaining to compete on the same terms, since they are compelled to use the works of men who are—from a Boston point of view—their inferiors.

But be the cause of this state of affairs what it may, it nevertheless remains true that New York and Philadelphia furnish us our text-books, literary matter, paper and all; and, after all, it is not out of the natural order of things. To this statement, however, we make one notable exception; it was in the city of Buffalo that Dr. F. H. Hamilton did most of the work upon which he based his famous treatise on Fractures and Dislocations, and its first edition was practically a Buffalo book, the like of which not even Boston has produced, and which constituted him an authority all over the civilized world; and we take just pride in this assertion in spite of the fact that its publication was entrusted to a well-known publishing house in the Quaker city.

POISONS FORMED FROM FOOD.

In recent numbers of *The Practitioner*, Prof. T. Lauder Brunton has been presenting a series of most interesting and entertaining essays on the subject of poisons formed from food and their relations to biliousness and diarrhœa. In fact, we feel it impossible to overestimate the importance of the information which he presents in such readable style, and regret that we can only summarize a very small amount of that which he lays before his readers. The only point in his papers which we feel like criticising unfavorably is that too-general and indefinite term, "biliousness." That the word expresses a condition, we do not deny, yet that condition is so vague and varying that we wish, for the sake of exactness, that some more precise term, implying exactly the condition the writer refers to, might have been employed.

He begins with the aphorism that "what is one man's meat is another man's poison," and calls attention to the fact that milk and eggs appear to be unwholesome food for certain individuals. For instance, with some, after eggs have been taken for two or three days together, the appetite becomes impaired, the intellect appears less clear, the conjunctivæ slightly yellowish, headache may occur, and the discomfort may culminate in an attack of vomiting or diarrhœa, or both. The vomiting and diarrhœa are sometimes preceded by constipation; and both eggs and milk, on account of their constipating quality, are popularly known as "binding."

Till within the last few years we have been very much in the dark regarding the causes of these and similar phenomena. The cardinal fact which results from recent researches is, that albuminous, or, perhaps, to speak more correctly, proteid, substances, which are themselves foods, may be split up so as to yield poisons. This decomposition is usually originated by various species of low organisms, and especially of bacilli, but it may be effected by the digestive ferments of the healthy body. The poisons formed by the decompositions of proteid bodies, such as albumen, fibrine, and gelatine, vary, not only according to the particular body which is decomposed, but to the particular organism or ferment which sets up decomposition, and according to the temperature at which it occurs and the length of time that it continues. Some of the products of the decomposition of proteid bodies are poisonous, others are innocuous. Amongst the poisonous bodies we find various degrees of activity, some being but slightly poisonous, while others are most virulent. When these poisonous products are separated from each other and isolated, they may remain unaltered and retain their properties for a length of time, but, when mixed together, they are apt to undergo further decomposition and become inert.

When putrefactive bacteria are sown on the flesh of mammals the substance they produce is an exceedingly active poison, neurine, but when sown on flesh of fish, another poison, chemically different but having a physiological similarity, is produced. This latter, muscarine, is of special interest, because it had only been procured from a fungus, the agaricus muscarius, until Brieger showed that it could be thus produced. Brieger has also demonstrated that the typhoid

bacillus, when cultivated in peptone, forms no poison, but when cultivated in meat jelly or meat infusion, it forms two poisons, which he has not yet isolated completely. One of these causes salivation, diarrhœa and paralysis; the other causes violent and exhausting diarrhœa. The importance of an exact knowledge of the substances which are produced by the decomposition of various foods by the action of typhoid bacilli on them is obvious. The plan of treating typhoid fever by an exclusively milk diet has probably saved many lives, but our use of this plan is, to a great extent, empirical. We do not fully know why it is successful, and although we may suppose that it is because the milk is non-irritating and does not irritate the intestinal ulcers, that is probably not all of the truth. If the effect of food in typhoid fever is a purely mechanical one upon the ulcerated intestine, calf's-foot jelly ought to be well tolerated; but if the typhoid bacilli decompose gelatine, so as to produce alkaloids having a violent purgative action, the jelly will be very injurious.

Kerner appears to have been the first to suspect the formation of alkaloids by the decomposition of albumen, and in 1820 he pointed out the resemblance between the symptoms of poisoning by sausages and by atropine. He made experiments upon animals, and appears to have thought at first that an alkaloid was present in the poisonous sausage, but afterwards he forsook the idea and regarded the fatty acids as the poisonous agent.

In 1856, Panum showed that the inflammatory change which occurs in the intestinal mucous membrane of animals poisoned by putrid matter is not due to the microbes contained in it, but to a chemical poison which remained unaltered when its aqueous solution was boiled for a long time.

Bergmann and Schmiedeberg isolated a crystalline poison from decomposing yeast, to which they gave the name of sepsine. Bence Jones and Dupré found a substance resembling quinine in the liver. Zuelzer and Sonnenschein obtained both from macerated dead bodies and from putrefied meat infusion small quantities of a crystalline substance which exhibited the reactions of an alkaloid and had a physiological action like atropine, dilating the pupil, paralyzing the muscular fibers of the intestine, and increasing the rapidity of

the pulse. Rörsch and Fasbender obtained from dead bodies a substance which had properties like digitaline, but which was not crystalline.

But the greatest impulse to the study of putrefactive poisons was given by Prof. Selmi, of Bologna. To alkaloids formed by the decomposition of proteid substances he gave the name of ptomaïnes. It was at first supposed that these differed in their nature from organic alkaloids formed by vegetables, and various reactions were given to distinguish between them. Recent researches appear to show that this distinction can no longer be maintained, and that both animal and vegetable alkaloids are similar in their chemical constitution, and are both products of albuminous decomposition. Pellicani has found a poison in the suprarenal capsule, and sometimes ptomaïnes may be obtained from the flesh of healthy animals. It is, therefore, probable that poisonous alkaloids are continually being formed in healthy men and animals by the decomposition of albumen in the intestinal canal during the process of digestion, or in the blood and tissues generally by the metabolism which occurs during the functional activity. A considerable portion of these alkaloids is in all probability destroyed in the body, but some are excreted in the urine and fæces, from both of which powerful poisons have been extracted.

It used to be an old saying, that nature never provided a poison without providing an antidote, and the fact that the dock leaf and the nettle usually grow together is often pointed to as an illustration. In the case of poisonous alkaloids there seems to be a good deal of truth in this saying, for various poisonous alkaloids which have an antagonistic action to each other appear to be produced by albuminous decomposition. It has not yet been ascertained how far the symptoms of poisoning from decomposing fish, flesh or sausages, or from the retention of morbid products of the organism itself, such as we see in cases of uræmia, depend upon a single poison or on a mixture of poisons. It seems, however, very probable that in many such cases we have more poisons than one, and that the comparative absence of symptoms in some cases may be due to one poison counteracting another. Brieger has found that two of the most important alkaloids produced by putrefaction are

neurine and muscarine; and to these may be added a third substance, choline. Choline is obtained by boiling bile, brain, or yolk of egg with baryta, and gets its name of choline from its having first been obtained by treating bile in the way just mentioned.

All these bodies—choline, neurine, and muscarine—have a similar action, but choline is much weaker than the other two. The lethal power of neurine is nearly ten times, and that of artificial muscarine fifty times as great as that of choline. The most marked symptoms which they produce are salivation, diarrhœa and vomititing, dyspnœa, paralysis and death. They seem to stimulate the secretion of glandular organs, because along with salivation there is also a flow of tears, and the secretion of bronchial mucus is rendered abundant and fluid as is shown by the occurrence of abundant moist *râles* within the chest. The dyspnœa, however, is not entirely due to abundant secretion of bronchial mucus in the lungs, because even in frogs choline produces a peculiar alteration of the respiration and dyspnœic movements.

Moreover, from decomposing fish Brieger has obtained two other alkaloids, ethylenediamine, which is poisonous, and gadinine, which is innocuous.

Four alkaloids which Brieger has isolated from cadavers, viz., neuridine, cadaverine, putrescine and saprine, have no marked physiological action; but he has isolated from human cadavers in an advanced stage of decomposition two alkaloids having a very powerful physiological action. One of these, when injected into guinea-pigs or rabbits, appeared to affect the intestine alone, and to have no action on any of the other organs. It caused an enormous increase in the peristaltic action, which lasted for several days, and the continuous diarrhœa led to extreme weakness of the animals.

Another alkaloid, which he terms mydalein, has a still more marked physiological action, and one which is of great clinical interest, inasmuch as we find amongst the symptoms a rise in temperature. No one who has watched cases of acute disease, such as pneumonia, can have failed to see how a rise of temperature sometimes coincides with the occurrence of constipation, and is removed by opening the bowels. In the case of such an acute disease as pneumonia, one has hitherto been unable to say definitely why con-

stipation should produce this rise of temperature, but it seems not improbable that it may be due to the absorption from the intestine of some ptomaïne.

Such inferences as these are the only legitimate conclusions which can be drawn, in view of such positive physiological and chemical data. So far as we can see now, the most brilliant advance to be made in general pathology in the next decade will be in carrying on this line of investigation. The influence of bacteria in causing disease, and the influence of alkaloids produced with or without their agency, must be much more exactly estimated before we shall be able to rationally discuss either etiology or therapeutics.

We regret that we cannot give more space to extracts from Prof. Brunton's learned paper, and we most earnestly commend it to the attention of every physician and student.

OUR COUNTY INSANE ASYLUM.

Since the appearance of our last number, the Fifth Annual Report of the Insane Department of the Erie County Alms-house has been issued by the Medical Supt., Dr. Chas. A. Ring. In this it is shown that 425 patients were treated during the past year, of whom 64 were discharged and 26 died; there were remaining October 1, 1885, 326 inmates. The report gives the usual statistical information as to monthly admissions, cost of keeping, etc. No medical information is attempted, and our only unfavorable criticism upon the report would concern giving "mental disease" as a cause of death.

Dr. Ring seems to be doing very excellent work among his insane patients, and it is to be hoped that he may be kept in the office which he fills so well.

EXTIRPATION OF SCROFULOUS GLANDS.

At the Leeds School of Medicine a most excellent custom prevails. The members of the consulting staff of the infirmary deliver extra lectures to practitioners and students. Dr. T. Clifford Allbutt and Mr. Pridgin Teale have lately delivered two lectures in this

course, on Scrofulous Neck and the Surgery of Scrofulous Glands. (Published by Churchill, London, 1885.) The former voices the dictum of modern surgery by saying: "My purpose * * * is radically to extirpate every caseous gland or portion of gland, and so quench promptly the smouldering fire." That this method of treatment is vastly superior to the old practice of long-continued internal medication, every one who has tried it will readily allow.

Correspondence.

PHILADELPHIA, Dec. 1.

EDITOR MEDICAL PRESS:

My Dear Doctor—The first number of THE MEDICAL PRESS came to hand some time ago, and I congratulate the Press Association upon the assured success of the journal, and the profession of Western New York upon again having a representative medical journal. Medical matters here in Philadelphia are just assuming activity again, after the quiet of the summer vacation. The lectures at the medical schools have been for some time in full operation, and the various medical societies are preparing for their winter meetings.

The University of Pennsylvania has recently taken a new stand in the matter of endorsing diplomas from colleges of other states.

The law of 1881, "An Act to Provide for the Registration of all Practitioners of Medicine," provides that before a person shall commence the practice of medicine in the State of Pennsylvania he shall file a copy of his diploma in the prothonotary's office in the county in which he intends to practice, and that, if a graduate of a college out of the state, he must obtain the endorsement of some medical college of the State of Pennsylvania on his diploma. From a circular recently issued by the Secretary of the Medical Faculty of the University, I quote the following:

"The Medical Faculty feels that the qualifications of applicants can only be determined by examination, and that it is not legally justified in issuing any certificates whatever, unless 'satisfied as to the qualifications of the applicant.' It, of course, believes that no one is qualified to enter upon the practice of medicine who cannot

pass the examinations required from students of the University. It therefore proposes hereafter to exact such examinations from applicants.

"In the future, all persons desiring from the University of Pennsylvania the endorsement on the diploma demanded by Sec. 4 of the Act of 1881, will be required to pass an examination on chemistry, anatomy, physiology, materia medica and therapeutics, pathology and morbid anatomy, practice of medicine, surgery, and on obstetrics: failure in any branch will cause rejection. To compensate for the labor of such examinations a fee of $30 will be charged."

I understand that the other medical colleges of the city propose to take a similar position.

The managers of the Pennsylvania Hospital have added a new department to their out-patient or dispensary service, at which incipient cases of insanity, and cases in its early stages, will be advised and treated. This is the first service of the kind, I believe, in this country, and I do not know of any exactly similar service in Europe. Attendance at this department of the dispensary will be on two days of the week, Monday and Saturday afternoons, and the medical service will be rendered in turn by the medical officers of the Pennsylvania Hospital for the Insane. Cases received at the dispensary are, of necessity, restricted to those not needing custodial care.

Realizing the importance of early treatment in cases of insanity, the managers of the hospital have, upon consultation with their medical staff, organized this department in the hope of reaching and relieving this class among the indigent population of the city.

The obstacles thrown around entrance to an asylum, in most of the states, are now so great, and in some instances—as the jury trial required by the law of Illinois—so oppressive, and accompanied by so much publicity, that the unfortunate insane are kept at home and not treated at all, or ignorantly treated, until the recoverable stage of the disease is, in too many instances, past. Medical men do not, I fear, fully apprehend that the first few months of disease, in cases of insanity, is, in the larger proportion of cases, the only hopeful period, so far as recovery is concerned.

Two or three cases have recently come under my observation in

this city, in which the friends of pauper cases applying for admission to one of the hospitals for the insane have been referred, by officers who should be, properly, charged with facilitating the access of proper cases to the hospital, to a lawyer, with the explicit statement that an attorney's fee of ten dollars would be charged for his services in getting out the papers. In one instance where a fee of this kind was extorted, the medical examination and certification required by law had been gratuitously made. The whole expense of the preparation of the proper papers for admission to a hospital for the insane, after the certificate and affidavit of the physician, should not exceed one dollar.

Before the Medical Jurisprudence Society, last month, a paper by Mr. Thomas W. Barlow, of the Philadelphia bar, and Dr. John H. Packard, one of the surgeons to the Pennsylvania Hospital, was read, on the subject of Privileged Communications.

The laws of Pennsylvania, unlike those of New York and some other states, do not protect, or regard as privileged, the communications between patient and physician, and it is proposed, I believe, to secure the passage of such a law.

It may not be generally known to your readers that the Court of Appeals of New York has sustained the opinion that any information which a physician gains from a person who consults him professionally is privileged, and cannot be communicated, except by consent of the patient.

In one case it was held that as soon as the patient entered the physician's office to consult him, a professional relation was established, and any knowledge, obtained by even a glance, was included under the head of privileged communications.

Some medical interest is excited over the case of the late actor, McCullough, who died in this city on the 8th inst., of general paresis.

The newspaper reports of this case, which have appeared for several months, have made it clear to the minds of those familiar with the disease, that the actor was suffering from this fatal form of brain disease; and a general relief was felt, when, in June last, he was placed in the Bloomingdale Asylum, where a diagnosis of paresis was made.

The progress of the disease was rapid, and a few weeks ago, in

a helpless condition, physically, and in a state of almost complete amentia, he was brought to his home in this city. One of his physicians has made public his dissent to the diagnosis of paresis, and, according to newspaper reports, has expressed the opinion that he was not insane, but the victim of "blood-poisoning"—in this instance a rather transparent term, used for the purpose of disguising the real condition.

It is well known that certain forms of "blood-poisoning" are of the most active causes of paresis, and nothing has yet been shown, nor do we—even admitting the blood-poisoning theory—think that a *post-mortem* examination, had one been permitted, would have shown anything to controvert the original theory and diagnosis.

The whole case shows the danger of discussing scientific topics in the newspapers. The case may yet come up for discussion in the medical societies; if so, and anything of interest is developed, I will keep you informed. Yours very truly,

CLAUDIUS.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Reported by Charles G. Steele.

In the absence of the president, Dr. W. W. Potter occupied the chair. Dr. F. R. Campbell read a paper on the "Relation of Meteorology to Disease." During the past four years, the doctor has compiled a number of statistical tables from the reports at the office of the Board of Health, and those furnished by the Signal Service Department. In the course of his remarks, he said it had long been known that each season was characterized by special diseases. He thought the men who were so busily engaged in the study of germs should take more into consideration the condition of the atmosphere—when favorable or unfavorable to the progression of the bacteria. During the past four years the death rate in Buffalo has decreased 15 per cent. This result has been brought about by the general sanitary condition of the city.

The doctor then read the result of his statistics showing the amount of precipitation, velocity of the wind, range of barometer, thermometer, etc., together with the death rate among adults and children, and the nature of the disease. The annual mean temperature of Buffalo was shown to be 46.25 degrees, thus placing the city in the cold plane. To be in the temperate plane, the annual mean temperature must be 50 degrees or over.

The highest temperature recorded in the four years was 91 degrees and the lowest 14 degrees below zero. Changes in Buffalo are sudden but not extreme. From the statistics collected, it is shown that the death rate increases with annual mean temperature. In a warm year there is more danger to health, especially for children under five years of age. Sudden reductions of temperature are more dangerous to the aged.

Most of the diseases of Buffalo are perennial in nature. The mortality among children constitutes 45 per cent. of all deaths. In Buffalo, the second quarter of the year is most healthy, and in the third quarter there is the most sickness.

Dr. Campbell read some figures which showed that the body becomes heavier in the summer than it does in winter. This is contrary to the accepted belief. The climate of Buffalo is such that it kills the weak and tends to make the healthy much stronger. From the statistics, it would seem that the death rate from phthisis is greater in summer. For this reason, the doctor thought phthisical patients should go south in summer and come north in winter.

Discussion.—Dr. A. H. Briggs, health physician of Buffalo, said that the records of the city were formerly very inaccurately kept, but at present the system is almost perfect. He thought that, owing to the fact that some of the records of the past four years had been stolen, there might be a few inaccuracies in Dr. Campbell's tables. He could paint on a map of Buffalo the locations in which 50 per cent. of all deaths occur. The Eighth and Ninth wards are the healthiest wards; the Fifth and Sixth report the most deaths. The great amount of sickness in the year 1881 was principally in these latter wards, where the wells dried up. After a heavy rain-fall the sickness decreased very rapidly.

Dr. Grosvenor said he thought the lesson to be drawn from Dr.

Campbell's paper was that physicians might better look after the comfort of their patients. If we know the time when certain diseases will be caused by changes in the weather, we can avoid them by proper precautions. The aged can be prepared, and we can know best how to care for the children.

Dr. Coakley had noticed that when the temperature was high in summer and the air moist, there was a great deal of disease and death. He inclined to the belief that the body took on more adipose in the fall and winter.

Dr. Crego doubted the statement that Buffalo was better suited for persons suffering from phthisis in winter than in summer. On the contrary, he thought the winters here were especially trying to them. He thought the records failed to record a great many deaths in which phthisis was the predisposing cause, as many of these patients die of pneumonia, and this is the cause of death as stated in the physician's certificate. He had found that in certain seasons of the year certain nervous disorders were more apt to prevail. There is something in the air which affects persons with neuralgia and enables then to prophesy when changes are about to occur.

Dr. Howe cited the case of a lady who had been attacked with melancholia in December for three consecutive years. Dr. Howe told of a map which Dr. Fowler had once prepared showing the scarlet fever districts of the city. He believed he could prepare one which would show where the greater portion of conjunctival troubles were prevalent.

Dr. Potter thought the death rate from phthisis increased in winter and decreased in summer.

Dr. Campbell said the principle purpose of his paper had been to show how we can prevent and control those diseases which are caused by changes in the atmosphere. He had endeavored to point out when to prevent and how to treat diseases by noticing the variations which occur. He thought that as people wore heavy clothes in winter, this might explain the idea that they grew in weight at that time.

Dr. Briggs said that the Board of Health was about to publish a map every month showing the places where certain diseases were prevalent. He read a clause from the city charter which ordered

physicians to report every zymotic disease to the Board of Health. In case this is violated, the physician is liable to a fine of $50. Dr. Briggs asked that the profession be more careful in making out death certificates, as many physicians send in as the causes of death, fits, convulsions, dropsy, jaundice, etc.

Voluntary Communications.—Dr. Hayd showed an urchin on whose scalp was a well marked example of tinea favosa. The disease is somewhat rare in this country, but more common in England and Germany. It is parasitic in origin, and a distinctive feature is that the eruption has the smell of mice. Dr. Hayd said it would be necessary to poultice the crusts off and apply a solution of the bi-chloride of mercury, gr. iii. to the ounce.

Dr. Howe reported a case of otorrhoa of two years standing. It resulted as a sequel of scarlet fever. Two weeks ago it became acute. He advised puncture of the mastoid portion of the temporal bone, but the child's parents would not consent, and death ensued. Pus was found in the meningeal cavity when the calvarium was removed. The veins of the lateral sinus were enlarged and there was considerable pus in the mastoid portion of the bone.

The association then adjourned.

Book Reviews.

A Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By various writers. Illustrated by chromo-lithographs and fine wood-engravings. Edited by Albert H. Buck, M. D. Vol. I. Imperial octavo, pp. 808. New York: Wm. Wood & Co.

While recognizing their utility, we have regarded with misgiving the rapid multiplication, of late, of so-called handbooks, believing that their very conciseness leads them to be read and studied too often to the exclusion of completer and better works. But we must confess our belief has suffered a rude shock after perusal of this volume. A better and more judicious combination of conciseness with completeness we have never seen, upon so great a number and variety of topics. Every department of medical science has received its due share of mention. The surgeon will find under the head of

amputation, a presentation of the history, indications and time for and technique of this subject, by Ransohoff, excelled by no other treatise that we have seen. Antiseptics have been thoroughly discussed by Drs. Sternberg, Wylie and Park. Kelsey has contributed an admirable article upon the diseases of the anus and rectum. Diseases of the bladder and breast, anæsthetics and aneurism are among the remaining more important surgical subjects, all of which are marvels of comprehensiveness when one considers the space they occupy.

Pathologists will derive much pleasure and benefit in the perusal of the descriptions of adenoma and carcinoma, the microscopical illustrations of which are unusually good.

Among the leading articles upon strictly medical subjects are those upon asthma and bronchitis, which receive thorough treatment from the pen of Thompson, and that upon anæmia, by Musser, which is a digest of the works of fifty different writers upon this morbid condition.

The field of materia medica has been extensively covered. Aconite, aloes, arnica, arsenic, and many other drugs are very thoroughly treated, the botany, physiological action, medicinal uses, dosage and officinal preparations, all, usually, receiving consideration. Handsome and exact illustrations accompany many of the articles. Had we any criticism to offer, it would be that the space allotted to remedies of such doubtful reputation and efficacy as black alder, angelica, angustura, box and others, many of which occupy one full column, might have been more jndiciously given to the consideration of the general class of alkalies, alteratives and astringents, which, in our opinion, receive too scanty mention.

The discussion of the physiology and pathology of the blood embodies about all that is known upon the subject, and will, undoubtedly, prove of great value to the busy practitioner.

By far the most elaborate and exhaustive article is that upon the brain, which occupies over seventy pages, in which are given its medical and surgical diseases, its histology, chemistry and development. When to this is added its anatomy to be given later, we shall have a veritable work on this organ.

If from this one we may judge the remaining volumes, the

Handbook will prove an excellent and most useful work. Indeed, too much credit can hardly be given to the editor and the publishers for the admirable skill they have displayed in the execution of their respective parts. The Handbook will be a valuable addition to any library, and its great utility to medical men must insure for it a speedy and substantial success. J. P.

A Text-Book of Pharmacology, Therapeutics and Materia Medica. By T. Lauder Brunton, M. D., D. Sc., F. R. S. Adapted to the U. S. Pharmacopœia by Francis H. Williams, M. D. 8vo., pp. 1035. Philadelphia: Lea Brothers & Co. 1885.

The author of this excellent book enforces the fact that therapeutics depends upon the science of physiology, by devoting nearly all of the first half of the book to the physiological action of the different organs and the modifications produced by the influence of remedies.

The conventional method of beginning with the remedy and finding out what it is good for, is discarded, and the true method of studying therapeutics by observations upon the organs in health, is given the prominent place it deserves. Not only are experimental results given, but the experiments themselves are illustrated and fully explained, adding much to their reliability. It may be said that it is a truly scientific work on therapeutics.

According to an object stated in the preface, it is a work not only for students but also for practitioners. The latter can find in it much that is new and useful, while the former class, by adopting the method of study it exemplifies, will rise a step above the present generation of therapeutists.

The illustrations are excellent, and form a very valuable feature of the work, especially those pertaining to physiology. The action of the heart and kidneys, and the influence of remedies upon their functions, are admirably pictured out. Other organs are not slighted, for every important function of the body is considered, and the latest results of investigation given.

The influence of bacteria as causes and modifiers of diseases, and the influence of drugs upon the germs, are treated in a temperate though positive manner. Valuable tables find place throughout the work.

A section on pharmacy is introduced, giving the preparations officinal in the British and U. S. pharmacopœias, with doses and methods in general of preparation. The section on materia medica conforms to both pharmacopœias, an advantage that will be highly appreciated. The chemical relations of the different medicines are well stated, and their toxicology receives due consideration.

The author uses the chemical and botanical classification of the articles of the materia medica instead of the usual system based upon their physiological action. This classification must be rather vague to the student, and were it not for the fact that in the sections on physiological action, the various remedies are grouped according to their action, we could hardly admit that the classification adopted is the one best calculated to aid the student. However, such grouping having been made, and being readily accessible by means of a very complete index, the chemical and botanical classification is a good feature, for it allows of study of the subject from different standpoints and brings out prominently the different chemical relations of the agents.

The book is well printed, and presents a good feature in emphasizing principal words by heavy-faced type. As a work on therapeutics, it is very complete; in fact, it has an astonishing amount of well-arranged matter, and it will certainly take its place with the best works, among those who study and practice scientific therapeutics. E. H. L.

A Manual of Microscopical Technology. By Dr. Carl Friedlaender. Translated and Edited by Stephen Y. Howell, A. M., M. D. Published by G. P. Putnam's Sons, New York.

Friedlaender's work in its original dress, though well known to German students, has lacked, heretofore, that introduction to American readers which only a translation could secure. That a demand for such a version existed is evident from the fact that two translations have recently appeared. One is a literal rendering of the German into English; the other, which is before us, is more than this. It has been adapted to the needs of the American student, who cares but little how much a foreign lens or stand may cost, but who does want to know the home price of the same. Comprehensive

foot-notes have been added where they might serve a useful purpose, some chapters have been carefully elaborated, and to the whole has been added an illustrated chapter on the cholera bacillus, treating of its morphology, reactions, etc.

Those who know Dr. Howell know how peculiarly well fitted he is for the task, which he undertook with the special approbation of the author. The book is not only a delightfully easy translation, but is published in such convenient shape as to permit it to be that which it purports to be—a manual.

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION, SEVENTEENTH ANNUAL SESSION, 1885. Pp. 430. Printed at Austin, Texas.

This rather attractive volume shows that our Texas brothers are maintaining a creditable standard of professional activity, as well as of literary ability. Beside the minutes of the meeting, the volume contains papers worthy of mention, as follows: A dignified and scholarly President's address, by Dr. H. C. Ghent, whose most marked characteristic, however, is its length, occupying, as it does, nearly forty pages. Dr. S. H. Stout contributes some rather valuable climatological notes. Dr. F. T. Paine thinks he has found *the* antaphrodisiac, for which the profession has been searching for many centuries, in the fluid extract of black willow (*salix nigra*). If the half of what he states as true concerning it can be obtained by it in the hands of others, he has certainly added a most valuable remedy to our armamentarium. He gives it in drachm doses three times a day.

Dr. C. M. Ramsdell reports some interesting cases of spider bite. Dr. H. W. Moore reports a case of traumatic dementia and hemiplegia, cured by trephining. The report on surgery, by Dr. E. J. Beall, is, perhaps, the most valuable paper in the collection, since it displays greater painstaking; among cases of his own he reports and figures a most interesting one of hernia cerebri.

Dr. C. W. Trueheart gives details of a case of aphonia of thirty-four years' duration, cured by removal of eight intra-laryngeal tumors.

Dr. C. L. Gwynn furnishes a short essay on hypertrophy of the labia nimora, which is well worth reading. Dr. J. R. Briggs relates how he treats distichiasis and trichiasis by electrolysis.

The most marked defect in the collection of papers thus summarized is careless editing and most abominable proof-reading. Had a little more care been exercised in these particulars, any Texan might point to the volume with just pride; as it is, we feel that it has intrinsic interest sufficient to atone for these blemishes.

THE MANAGEMENT OF LABOR AND THE LYING-IN PERIOD. A Guide for the Young Practitioner. By Henry G. Landis, A. M., M. D., etc. Pp. 332. Philadelphia: Lea Bros. & Co. 1885.

Among all the new works on obstetrics which claim our attention at this time, none is more deserving of notice than the one now before us. It differs from any other treatise on obstetrics with which we are familiar in that it leaves out an immense deal of what to the general practitioner is of very little moment, and makes prominent the practical points. Nor is it merely a digest or abstract of what has been before written. While the author is evidently familiar with the views and doctrines of others and with recent advances in the obstetric art, it is equally evident that he is a close and intelligent observer and has formed opinions and ideas of his own. His teachings are, therefore, eminently practical and have borne the test of his own experience.

After considering the management of a simple labor, his directions for which are sound, he takes up the forms of difficult labor which are most commonly met with. Then the complications of labor, such as hemorrhage and convulsions. This is followed by several chapters on forceps and version, with short chapters on Cæsarean section and embryotomy. Chapters on the period after delivery and its complications complete the work. Thus he gives about all that a general practitioner needs to know, and though he would leave one to think from his title-page that he is writing for young practitioners, there is scarcely an old practitioner, however large his experience, who would not be improved by reading this work. The style is pleasant, and, like all of Lea's publications, the book is well gotten up.

In thus commending the work, we do not wish to fully endorse all of his teachings. In many minor points we would differ, but that does not alter our views as to its general character. For the

general practitioner, young or old, who wishes to refresh his knowledge and keep abreast of the times without wading through too much reading, we can heartily recommend Prof. Landis' book. M.

THE ESSENTIALS OF PATHOLOGY. By E. A. Schäfer, F. R. S. Pp. 245. Philadelphia: Lea Brothers & Co. 1885.

Mr. Schäfer is so well known as the writer of those parts of Quain's Anatomy (9th ed.), bearing on histology, and as a worker and expert in this line of study, that any new work of his must assume an authoritative position at once. While many of the illustrations will be recognized by students of Quain, they are not unwelcome, because they are good.

The work is less a book for the library than for the laboratory. It is, in every sense, a manual. It is divided into forty-two lessons, each of which is preceded by detailed instructions, serviceable alike to instructor and pupil, and made suggestive by a profusion of illustrations, of which there are, altogether, two hundred and eighty-one. By following carefully its directions, one may become a fairly-competent histologist, without other instructor. We commend it most highly to those who use, or would like to use, the microscope —and who should not?—and commend its publishers for giving it such an attractive appearance.

PARACENTESIS OF THE PERICARDIUM. By Jno. B. Roberts, A. M., M. D. Pp. 100. Philadelphia: (Compliments of the Author.)

Dr. Roberts' studies with reference to the matter of aspiration for the relief of pericardial effusions have been known to the profession for several years, though chiefly through various journal articles. He has now presented in the above monograph an epitome of his own work, as well as varied statistical information, which together form a volume of no mean size, and constitute a most valuable addition to literature. The indications as well as the directions for this really minor operation are so admirably and concisely stated that one can only wonder how long a universal recognition of its merits has been delayed. Proposed in 1869, it was not fairly introduced until Dr. Roberts himself led the way.

Lippincott & Co. are the publishers, of whom, doubtless, it may be ordered.

THE PATHOLOGY AND TREATMENT OF DISEASES OF THE OVARIES. By Lawson Tait, F. R. C. S. Fourth edition, rewritten and greatly enlarged; pp 357. New York: Wm. Wood & Co. 1883.

No one who practices gynæcological surgery now-a-days can afford to be without this work of Mr. Tait's. As a bold yet conservative operator he stands not far from the head, while his results have been little short of marvelous. He is the more to be admired in that he combines, with all his operative skill, sound pathological knowledge. So many men who are brilliant operators have but little of the latter to make them conspicuous.

Mr. Tait's work has now been before the profession long enough for its merits to become recognized, and has already received such ample review that such is not called for here. Nothing in it inspires more admiration, on the writer's part, than his suggestion to open the abdominal cavity in cases of acute suppurative peritonitis, wash it out and drain it,—and the *success attending this procedure.* The man who teaches the profession that this can be done with a certain percentage of success, has conferred upon it a boon which will entitle him to lasting gratitude.

EPILEPSY AND OTHER CHRONIC CONVULSIVE DISEASES. By W. R. Gowers, M. D., F. R. C. P. Pp. 235. New York: Wm. Wood & Co. 1885.

The present work by Dr. Gowers is an elaboration of his Gulstonian Lectures of 1880, and is deserving of very warm commendation as an effort not only to seek out the hidden causes of certain most obscure nervous disorders, but to find a rational basis for a therapy which may in some measure be termed scientific. Symptoms are most carefully considered, causes critically discussed, allied affections differentiated, prognosis attempted and treatment dispassionately advised. Under the latter head we should have been pleased to see more attention given to operative measures like trephining and circumcision.

The volume is the September number of Wood's Library for 1885.

A MANUAL OF THE DISEASES OF WOMEN, ETC. By Charles H. May, M. D. Pp. 357. Philadelphia: Lea Bros. & Co. 1885.

This may be supposed to be a companion book to the one by Dr. Landis, as it is uniform in size and bears the same imprint.

It is, however, a very different affair. One of the pestiferous class of books which are written not to teach the science and art of medicine but to help students to cram for an examination. Medicine is too full of exceptions and doubtful points to admit of having its teaching boiled down into hard and fast rules and dicta.

With the execution of his work, we do not find much fault; and as it is based on the teachings of the best authorities, it is, in the main, sound. But such works have, in our estimation, a bad influence, and their multiplication is to be deprecated. M.

STUDENTS' AIDS SERIES. New York: G. P. Putnam's Sons. 1885.

These "Aids" are excellent quiz compends, and may be made of great use to students and quiz masters, or to those preceptors who systematically quiz their students. They are handsomely yet cheaply printed in 16mo. form, bound in either paper or cloth, and are prepared by men eminent in their respective departments, as witness the names of Fothergill, Semple, Thorowgood and others.

BOOKS RECEIVED.

From G. P. Putnam's Sons, New York:

Students' Aids Series: Aids to Gynæcology; Aids to Obstetrics; Aids to Surgery; Aids to Medicine. Pt. III.

From Lea Bros. & Co., Philadelphia:

The Management of Labor: H. G. LANDIS.
Manual of the Diseases of Women: C. H. MAY.
The Essentials of Histology: E. A. SCHAEFER.
A Text-Book of Pharmacology, Therapeutics and Materia Medica: T. LAUDER BRUNTON.
Manual of Operative Surgery: L. A. STIMSON.

From Wm. Wood & Co., New York:

Clinical Notes on Uterine Surgery, Memorial Volume: J. MARION SIMS.
Venereal Memoranda: P. A. MORROW.
Cutaneous Memoranda: H. G. PIFFARD.
Climatology and Mineral Waters of the United States: A. N. BELL.
Diseases of the Lungs; GERMAIN SEE.
Diagnosis of Diseases of the Brain and Spinal Cord: W. R. GOWERS.

From Authors, etc.:

Paracentesis of the Pericardium: JNO. B. ROBERTS.
Microscopical Technology (Friedlaender's): S. Y. HOWELL.
Transactions of the Texas State Medical Association, 17th annual session, 1885.

INCOMPATIBILITY OF CHLORAL HYDRATE WITH POTASSIUM BROMIDE.

In a paper recently read before the Massachusetts State Pharmaceutical Association, Prof. Markoe stated the results of a series of experiments upon the combination of chloral hydrate and potassium bromide in the presence of alcohol. He found that in a two-ounce mixture containing ninety grains each of these agents and three drachms of alcohol, present in paregoric, other tinctures or alone, the balance being made up with syrups or water, a separation of the fluid into two layers always took place, the upper one containing the chloral in the form of an alcoholate. When the potassium bromide was replaced with sodium bromide, sodium chloride, or magnesium sulphate, the same separation took place; but with ammonium chloride, ammonium bromide, potassium nitrate and calcium bromide, the chloral solution was not disturbed.

At the close of his paper, he says: "The practical lesson to be learned from this incompatible prescription is, that alcoholic preparations should not be prescribed with chloral hydrate, especially not in connection with the bromides of potassium or sodium, because if the solutions used are at all concentrated, the chloral will separate as alcoholate, float on the surface, and a great risk will be incurred of giving a large overdose; the patient having received no caution with regard to the necessity of shaking the contents of the bottle before taking a dose."

NOTICE.

In order to make The Medical Press of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

For Sale.—A Beck's popular Binocular Microscope, with or without lenses, as desired. Address "Microscope," care of The Medical Press.

For Sale.—A Physician's residence and practice in one of the best towns in Ohio; population 2000; good roads and fine country. Present owner intends to retire. Address: E. Y. King, M. D., Richwood, Union Co., Ohio.

The Medical Press
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ON THE INCREASE OF INSANITY:

Being the President's Address, delivered at the Annual Meeting of the Erie County Medical Society, January 12, 1886.

By J. B. Andrews, M. D.,
Superintendent of the Buffalo State Insane Asylum for the Insane.

So much has been written concerning the great increase of insanity in the country within the past few years, as to awaken a general interest in the subject, not only in the profession, but also among the people. The question is very frequently asked: "Is there not an alarming increase of persons becoming insane out of proportion to the growth in population?" and sometimes it is put in sober earnest: "Will not the insane soon outnumber the sane?" The manner of the interrogatory indicates a belief in an affirmative reply.

The proofs presented, in support of this belief, are:

First—That new institutions for the treatment of the insane are being rapidly multiplied, and filled to the utmost capacity so soon as they are opened for the reception of patients.

Second—That the census shows a large and constantly progressive increase in the number of the insane.

Third—That the questioner is familiar with so many cases of insanity in the list of his acquaintances, and reads in the daily newspaper of so many suicides and homicides committed by the insane.

Then follows a homily on the causes which produce the increase, viz., the hurry and bustle of life, the competition in business, the push to acquire wealth, the fast living, and the direful tendencies of the advanced civilization of the age.

This view is gloomy and forbidding enough to furnish food for reflection for the thoughtful, and to arouse the interest of the patient tax-payer, who has to bear the burden of supporting this helpless class. Now, while it must be acknowledged that there is an increase of insanity, there are some considerations which lighten the somber shading and may encourage the sane to hope for the continued occupancy of their present vantage-ground. While what we may say will not reduce the number of the insane, it will show that this, in part, is an apparent increase, and, secondly, from what sources the actual increase is derived.

One element in the apparent increase of numbers is found in the fact that the boundary lines of insanity have, within recent years, been widely extended, and that this process is still going on. Formerly but two classes of people were accounted as insane, viz., those who were openly maniacal and boisterous in their conduct, and those who were so demented or feeble in mind as to be entirely dependant for support and direction upon others. All the divisions of insanity between these limits, the melancholic and depressed, the more quiet cases of chronic mania, the periodically insane, the epileptic, the delusional insane, those broken down from age, from apoplexy and from syphilis and all the milder forms of the disease, were ignored and left to care for themselves. The community simply protected itself from the openly violent and cared for the helpless whose reason was utterly dethroned, but did little for the care or restoration of the larger number of lunatics. They did not crowd the hospitals or asylums, nor did they appear in the census returns. Persons who retained coherence of speech or a semblance of rationality, and were able to perform the simplest business transactions or to manifest a modicum of control under favorable circumstances, though they might be governed by the most dangerous delusions, were considered to be in the possession of their mental faculties, and were accounted as sane and responsible. The fact that there was a definite cause for the change in the individual was often sufficient to

remove it from the classification of insanity. That a person who might be suffering from melancholia of the most pronounced type had met with a loss of property or of friends was often sufficient proof that it was but normal depression and not insanity, which to the popular mind was something strange, a supernatural condition induced by equally unnatural causes.

The comparatively recent advances in medical science, especially in the appreciation of mental states, has brought about more correct views of the irresponsibility conferred by disease and increased the number accounted as insane. This extension of the classification of disease has simply taken a certain number out of the classes of the nervous, the hypochondriac, the childish, the simple-minded, the broken down, the eccentric, the opium-takers, the gloomy and broken-hearted, in which they were formerly placed, and transferred them into another list, in which they are now numbered. It is like the increase in the population of a city made by the addition of an outlying suburb, an absorption of citizens from another locality, and not an increase of new persons gained by births or by immigration. This is not an actual, but an apparent increase.

Another factor in the apparent increase in the numbers of the insane, is the greater longevity under the present improved modes of care. The actual value of this factor cannot be computed by years, but its existence is acknowledged by those conversant with the facts. The individual life is prolonged by the favorable circumstances of its environment.

In the asylums erected and conducted by the State, every detail of location and construction receives the most careful attention. The sewerage, the heating, the ventilation, and all the hygienic conditions are arranged in accord with the most advanced views, and whatever experience has shown necessary or even beneficial to the health of the inmates, is fully supplied. The constant attendance of physicians and attendants who devote their whole time to the care of patients, directing and regulating the diet, the strictly medical treatment, the exercise, the occupation, the amusement, the hours of sleep, and in fact the whole life of the individual, provides a supervision in marked contrast to former neglect and indifference,

which it is universally conceded has added years to the life of the insane.

As strengthening the position, we would refer to the fact that under the improved modes of living due to the diffusion of the knowledge of hygiene in its broadest sense and the advance of medical science, the life of the generation of mankind has been lengthened from the proverbial thirty-three years to nearly forty.

The multiplication of asylums finds its explanation in part in the philanthropic spirit of the age. The same spirit of sympathy for the helpless and unfortunate which through private charity erects hospitals for the deformed and for the sick, homes for the aged, orphan asylums and foundling hospitals, retreats for the fallen and the inebriate, also erects, by aid of the public purse, asylums for the insane, the idiotic, the deaf and dumb, and the blind. These latter classes, from their greater helplessness, the State has adopted as its wards. It erects institutions for their care and invites all who need to occupy them and receive their benefit. They are erected in a broad humanitarian spirit by the people, for the people. It is this spirit which furnishes the strongest refutation of the foundation principle of the theory of evolution, "the survival of the fittest." It is for the care and preservation of the weak and helpless and not for the strong and helpful only.

There has been within a few years a marked change in public feeling in regard to sending patients to an asylum for treatment. The time is within the memory of many of us when it was considered a disgrace that a member of one's family was insane. Every effort was made to conceal the fact, and the unfortunates were hidden away in out-buildings, in attics and cellars, where they were restrained by chains and shackles, and not only left without the comforts, but too often without the necessities of existence. Life was usually of short duration under such unfavorable conditions. It was not cherished nor prolonged, and death was a welcome visitor. The census enumerator never reached them, and their death did not swell the vital statistics. At the present time, from a knowledge of the kind care and judicious treatment afforded by asylums, patients are more willingly sent, and it is made the duty of the proper authorities to transfer the insane to an institution when their friends

neglect to take the step. That they are filled to their capacity is due to several causes, and first, they are not erected till there is an imperative demand for them, and often not until there is such an accumulation of the insane as to fill the various wards as soon as they are ready for occupancy. This rapid reception of patients attracts attention and gives origin to the belief that there is an alarming increase in the disease.

Experience has shown that asylums are used by the people according to their nearness and ease of access by well-defined lines of travel. A new asylum erected in the midst of a populous district, which before was compelled to send its insane to some remote point, is used more freely and readily. The friends are more willing that their insane should go to an asylum which is near at hand, where they can visit them and have an intimate knowledge of how they are cared for and treated, and the public is more ready to send patients in view of the diminished cost of transportation to and from the asylum.

The fact that when the insane of the County of Erie were sent to the asylum at Utica they numbered a resident population of about seventy-five, while since the asylum was established in this city the general average is double that number, does not show that there are twice as many insane, but that the people and the public use the asylum more freely because of its nearness and the decrease in cost of transportation. This increase in numbers does not represent an actual, but only an apparent increase in the number of the insane. They existed in the community, but were not brought together under public notice.

Second—The asylums of to-day are not the bedlams and madhouses of former times. They are hospitals for the sick and for the treatment of disease, and owing to the extended boundary lines they contain every shade and degree of disturbance of the mental equilibrium. Even the law specifies that the terms "lunacy," "lunatic" and "insane" shall include every kind of mental unsoundness. They receive all classes and ages of mankind, from the youth with the peculiar manifestations attending the development of puberty, to the aged who become troublesome from the aimlessness of their conduct or indifference in habits.

Third—The other public institutions, the jails, the penitentiaries, the homes for the old and the young and the general hospitals, contribute their quota to swell the numbers treated in asylums.

Fourth—The increase of education upon the subject of insanity in the profession from the instructions given in the medical schools has increased commitments to the asylums. This arises from a knowledge of the benefit of treatment to be gained by all of the insane, and from a recognition of the disease in the earlier and more curable stage. It is in this latter direction that the profession is doing a most important work, and one which presents the most hope of successfully combating the increase of the disease.

NOTE.—The law very properly places the certification of insanity in the individual upon the medical profession. In the performance of this duty they are often held up to public censure. They have been charged not only with criminal carelessness, but even with having been bribed to commit patients who were not insane, but whose friends desired their being sent to an asylum from some personal and improper motive. I wish to say in answer to all such criticisms and charges, that after an experience of nearly twenty years and with many thousand patients, I have found that this duty is performed by the profession with the most jealous regard for personal rights and with a full sense of the responsibility imposed, and I have not met with a case in which any improper motive could justly be imputed to the examining physicians. And, further, I wish to say, parenthetically, that the law of commitment of our own State is the most perfect of any with which I am familiar, not even excepting the law of Great Britain, which is so often held up as a model of all that is to be desired.

The effort to prove the increase of insanity by the many cases of suicide and homicide reported in the press of the day as occurring among the insane, has little weight. It finds a ready solution in the increased facilities for the gathering of items of news. Every day we have spread before us the occurrences of the previous day, collected from all parts of the land among a population of many millions, and that they make a startling array, is not a cause for wonder or alarm. In the haste to supply a cause, whether real or imaginary, most of them are placed in that most convenient of all classifications, insanity. It seems as if the existence of moral depravity, of passion engendered by drink, and of a calm determination to destroy human life had been overlooked, and that every destructive and violent act was placed to the credit of lunacy. It

is an easy thing to cover crimes and misdeeds under the broad cloak of lunacy, but it is often but a clumsy and cowardly excuse.

The strongest argument in favor of the increase of insanity is found in the census returns. Here we have an array of figures, which, on their face, present evidence of an alarming increase in the number of cases, especially within the past two decades. It is said that figures will not lie, but a simple statement of them, without an explanation, may be greatly misleading. There is no form of disease in which such care is exercised in the enumeration of cases as in insanity. This is done by the National and State governments, by State Boards, by voluntary organizations, aided by individual effort, both at regular and irregular intervals.

Each independant enumeration leads to greater perfection in the methods employed, and in the final result. In this the people have a lively interest, as from the helplessness and dependence of the disease, the great majority of those afflicted become applicants for public charity. Of the 15,000 insane of the State of New York, 12,000 are inmates of its asylums, and of these less than ten per cent. are self-sustaining.

In considering the subject of insanity, we turn for information to the different national censuses, and compare those of the two prior decennial periods with the most recent one of 1880. The census of 1860 gave twenty-four thousand to thirty-one million, in round numbers, of inhabitants, or one to every thirteen hundred. The census of 1870 gave thirty-seven thousand to thirty-eight million, or one insane person to every one thousand; while the census of 1880 gave ninety-two thousand to fifty million, or one insane person to every five hundred and forty-five of the population, showing an increase of nearly one hundred per cent., while the increase of the population is only twenty-five per cent.

There is the same proportionate increase in the State of New York. The census of 1870 showed one insane person to every six hundred and eighty-nine of the inhabitants, while the census of 1880 gave one insane person to every three hundred and sixty, or an increase of nearly one hundred per cent. the same as shown in the general census.

Now, without explanation, we can only conclude that the infer-

ence is correct, that insanity has increased an hundred fold in the past ten years, or that in 1880 there are twice as many insane in the country and in the State of New York as in 1870. This would fully bear out the statement that there was an alarming increase. We shall endeavor to show that this increase is in part an apparent, and not an actual increase.

In order to make the comparison a just one, it will be granted that the different reports should be taken under the same favorable conditions and with equal care and accuracy. Now, what are the facts:

First—The census of 1870 was notoriously imperfect in its emumeration of the insane. This was publicly stated by the State Boards of Charities of some of the states, and generally accepted by those in a position to know, and was conclusively proved by the reports obtained from other sources.

Second—This lack of thoroughness in the previous national census led to the careful enumeration of 1880. This was placed in the hands of an expert and was made with the most scrupulous attention to every detail. As a result it is acknowledged as the most complete and accurate count that was ever made in this, if not in any country.

Granting the truth of these statements it becomes evident that the increase in insanity did not all occur within the last decennial period, but that it in part belongs and should properly be spread over the other years included in the report of 1860 and 1870.

As substantiating this I quote from a paper read before the Conference of Charities and Corrections, by Professor A. O. Wright, of Madison, Wisconsin. "The census reports of 1880 show a startling increase in the number of the insane. Much of this is only an apparent increase caused by the far greater accuracy of this part of the census report of 1880, under the skilled care of Fred H. Wines, the last president of this conference. When we read that the census of 1870 showed 37,432 insane in the United States, and the census of 1880 showed 91,959, we must not suppose that there had been an actual increase of 54,527 insane, but these increased figures chiefly show a more accurate census of the defective classes under more skilled management."

These comparisons are made to refute the belief so generally accepted by those who have not investigated the subject, that the number of the insane have actually doubled in the past ten years, and that we must therefore anticipate another like increase in the next decade. The outlook is not so gloomy, and though the statistics of insanity will undoubtedly show an increase it will be in an arithmetical rather than a geometrical ratio.

Increase is the inevitable tendency of age. This is shown by the history of the older countries, and has a striking proof in the statistics of the last census. By averaging the states geographically,as has been done by Professor Wright, the result obtained is that the oldest states are found to have the largest proportion of insane people, while the newer states and territories have the smallest percentage. In the New England States the proportion of insane is one to every 359 of the population; in the Middle States, one to every 424; in the Interior States, as Ohio, Indiana and Illinois, Michigan and Wisconsin, one to every 650; in the Northwestern States, Iowa, Minnesota and Nebraska, one to every 750, and in the newer states and territories one to every 1,263. This illustrates the oft-stated truth that the pioneers of the new states are the more hardy and vigorous citizens of the older settled portions of the country.

Youth and health are demanded to contend successfully in the struggle to erect a home on the unbroken soil of the prairie, or to wrest from nature the wealth hidden in the mountain side or the river's bed. The feeble, the dependent, the sick and the aged are left to enjoy the comforts found only in the older communities, in the asylums, hospitals and homes which are the growth of an age of philanthropy.

Noting the greater ratio of the insane, in the more settled portions of the United States, we are led to consider the experience of older nations, and especially of Great Britain. We find here that the proportion of insane is about one to every 350 of the population, and that this result has been reached after the most careful annual accounting by the efficient Board of Lunacy Commissioners.

In the report of 1884, in their discussions of the subject they use substantially the following language: "The increase of the insane

has been for many years slow and constant among the pauper and dependent classes, but among the private patients the proportion has been practically stationary during the last few years, and it is now lower than it was two years ago." And further: "The large annual addition to the number of insane persons under care has produced, in some quarters, an impression that insanity itself is much on the increase. On examination, however, of the figures now under consideration, it will be found that the increase is almost entirely due to accumulation of chronic cases of the pauper class, so that the community at large would not appear more liable than formerly to be attacked with insanity. This should tend to allay public anxiety, but those to whom the law has entrusted the responsibility should not disregard the imperative necessity of making the accommodation for such additional and accumulated cases keep pace with the requirements of their respective districts."

We may anticipate a like experience and look forward to a steady increase, but with the hope that this may be in proportion to the population, after we have reached a full accounting of the present number, especially of the accumulation of the chronic insane.

These are some of the arguments which go to prove that the large increase in the number of the insane within the past two decades is an apparent rather than an actual increase. We may now consider another part of our subject which we shall treat but briefly by statistics, viz., the source whence the increase of insanity is most largely derived.

From an analysis of the last census, Dr. Foster Pratt of Michigan draws the conclusions, that a prominent factor in the increase of insanity is the large defective element found among the foreign population which has emigrated to us since 1847 and 1848, and that this now constitutes one-eighth of the population and furnishes one-third of the insane. In our own state, according to the report of the State Board of Charities for 1884, of the 14,111 insane 7,790 are of native birth, or one to every 497 of the native population, while 6,321 were of foreign birth, or one to every 192 of the foreign population. The recent census for the year 1885 in the State of Michigan shows that more than one-half of the present insane population of that state is of foreign parentage. The same fact is stated upon

high authority to exist in the State of New York. In the year 1881, the asylum on Blackwell's Island reported (and this is not an exceptional year) that more than one-half of the admissions for the year were of people who had been subjects of Great Britain.

These statistics, together with the known facts regarding the number of the insane among the emigrant population, have given origin and support to the statement that the old countries are systematically sending to us large numbers of their insane, and that this action leads to the increase of insanity in our midst. It is at any rate an appreciable factor, and one so prominent that steps are being taken to procure national legislation upon the subject. An examination into the mental condition of emigrants at the port of sailing, by properly constituted authorities, and the refusal to allow steamship companies to transfer the insane and defective classes to our shores, is proposed. Such a course may not be adopted, but the fact that it is earnestly advocated by those who have made a careful study of the facts and of the statistics, show that there is a strong ground for the belief that more than a reasonable share of the insane is included among the emigrants who throng our shores. This class, and the natural increase of the native-born insane proportionate to the increase in population, will in the future constitute the census of the insane.

The State Board of Charities have reported, during the five years of this decade, an annual increase in the number of the insane under public charge, of from five to seven hundred patients, or an average of about six hundred. For the period of ten years, this amounts to an increase of 6,000, which added to the 14,000 of the year 1880 makes a total of 20,000 insane to a future probable population in the state, in 1890, of 6,000,000, or one insane person to every 300 of the population. To state it in another way, there were in the various asylums of the state, on September 30, 1885, 12,830 insane. With a proportional increase of 600 annually, the institutions must provide in 1890 for about 16,000 inmates, while those under private care will swell the number to 20,000.

To provide for this increase is the problem before the people of the state, and it is the part of wisdom to question how this can best be done. The asylums are filled to their capacity, and some of

them are overcrowded. Further accomodations are imperatively demanded and must be furnished.

It is well at this time to survey the ground over which we have passed. In doing this we find that the principal sources of the increase of insanity are of two kinds, apparent and actual; that the most important of the former is, first, the widening of the boundary lines of the disease, and, second, the increased longevity of insane life. That the sources of the actual increase are, first, the increase of population, and second, the defective element of our foreign immigrant population. The causes of the apparent increase are capable of self limitation, as the boundary lines of insanity are not likely to be further indefinitely extended, and the full result of the increased longevity should be reached within the present generation.

Now, if the immigration of the insane and defective foreign classes can be held in check, we shall have to care, in addition to the present census of the insane, for an increase proportionate to the increase of the population only. The task of reducing this number within narrower limits is the great problem presented to preventive medicine for solution. This is the most hopeful view which the facts of the case vouchsafe us.

DR. A. C. MOORE, of Amelia, Ohio, referring to the case mentioned by Dr. B. G. Long, in THE MEDICAL PRESS for December, says that he delivered a lady of a large, well-developed, full-term child just *two hundred and ninety* days from the time when he had previously delivered her of another full-term child. The doctor exhibits no small pride over the activity and powers of the people in his community, judging them to be in this respect superior to those of Western New York.

WE HAVE recently had occasion to purchase some slides of the Palmer Slide Co., whose advertisement will be found in its place in THE MEDICAL PRESS, and can not refrain from a word of commendation of their beautiful clearness, perfect refraction, and general attractive appearance. They are the finest slides made—in our estimation.

THE MICROSCOPE IN MEDICAL DIAGNOSIS.

A Paper Read at the Regular Meeting of the Cattaraugus County Medical Society, Held at Salamanca, December 2, 1885.

By H. D. Walker, M. D.,
Franklinville, N. Y.

Mr. President and Gentlemen of the Society:

I was appointed, at your last meeting, to prepare an essay on some microscopical subject. I have, therefore, chosen for a few remarks to-day, the "Microscope in Medical Diagnosis."

The subject is one of such vast extent and importance, that it is possible, at this time, to present only a brief outline of the different diseases in which it will render us efficient service. In doing this we shall follow out the classification of diseases as adopted by the State Bureau of Vital Statistics, and under each division briefly refer to those diseases in which the microscope aids in clearing up the diagnosis.

First, we will notice the class of zymotic or specific febrile diseases. Here we are brought at once face to face with that great question of such vital importance in the study of medicine, namely, the Germ Theory of Disease. It is apparent at a glance that the microscope is the only means at our command through which we can ever hope to satisfactorily solve the mystery which surrounds this class of diseases. But what is the present opinion of scientists in regard to this question? We believe the majority of our best men accept it as true in regard to some diseases, and as not improbable, though not proven, in regard to others.

In order to understand exactly what we are talking about, we would ask—what is the Germ Theory of Disease? We answer, it is that doctrine which supposes that some diseases are caused by minute plants, the lowest forms of vegetable life, which, by their multiplication, either within the blood or certain organs, or upon mucous

surfaces of the body, cause certain changes which impair the vitality, and often cause the death of the subject affected.

Does this theory receive any support from the natural history of other organized bodies? We answer, it does; very many instances can be brought forward, both from the animal and vegetable kingdom.

In the animal kingdom we would refer to the silk-worm disease of France, which at one time almost destroyed that industry. This was caused by the growth within the body of the worm of a minute plant (Botrytis bassiana), belonging to the Fungi. Our common house-fly dies in great numbers each autumn from the development of a small fungus called Empusa musci. The filaments of this plant are seen to project from its body, when examined with a low-power microscope, and a white circle of spores are formed around it, which can be plainly seen when it rests upon a window-pane.

In the vegetable kingdom we will refer you to the rusts and smuts of different plants, and also to the well-known potatoe rot, caused by a minute fungus, Botrytis (Peronospora) infestans. To be sure, these plants do not belong to the same family as those which generally affect the human body, but we must remember that each different order of animal and vegetable life usually requires a different kind of food for its sustenance.

The family of plants which is supposed to be the cause of the specific febrile diseases is called Bacteria. Of all living organisms they are the most widely diffused. We find them floating in the air we breathe, in the water we drink, and mingled with the various kinds of fluids circulating through the vessels of both plants and animals.

On account of their universal .presence great caution is necessary in the study of the natural history of disease. We must not conclude, as is too often done, because we find a certain species present in a particular disease, that they are the cause of this disease. The only way we know of determining positively whether such is the case, is by experiments, not upon animals, as has been done, except we know they naturally have the disease in question, but upon man himself. I think I have somewhere in my reading seen it recommended to utilize criminals, condemned to death, for

purposes of scientific study. For what better object could they be used than that of working out, through experiments on them, the natural history of the specific febrile diseases?

Bacteria are distinguished from many, though not all other kinds of vegetable life, by an absence of the coloring matter, or chlorophyll. The family is divided into four tribes, differing widely in their appearance. They are named the Sphero-bacteria, or spherical bacteria, the Micro-bacteria, or bacteria in short rods, the Desmo-bacteria, or bacteria in straight filaments, and the Spiro-bacteria, or bacteria in spiral filaments. We will endeavor to name the different specific diseases in which bacteria are supposed to be the contagious element.

The first we will mention is small-pox and the vaccine disease, which are thought to depend on the presence, in the pustules and various organs, of a species of the genus Micrococcus, which belongs to the family of Sphero-bacteria. The micrococcus of small-pox and the vaccine disease look alike, and are supposed to be varieties of the same species. In measles, micrococci are said to have been found in the breath, in the papules, and also in the blood. In scarlet fever a micrococcus has been found in the blood, which is believed to be the cause of the disease. In diphtheria a micrcoccus, which is supposed to be the infectious agent, is seen in the false membrane and in the blood. The remaining diseases of this division, thought to be caused by a specific germ, are whooping-cough, typhus, typhoid and malarial fevers, cholera, hydrophobia, glanders, malignant pustule, erysipelas, pyæmia and syphilis.

It is a well known fact, that some of these diseases are communicable to the inferior animals and through them may be imparted to persons. It is, indeed, quite probable they prevail as an epidemic some years among animals, and thus cause serious loss of property.

We now come to the class of constitutional diseases, and rheumatism and gout, in their different forms, claim our first attention.

Various are the theories which have been put forward to account for these diseases. Rheumatism is supposed by some to be primarily of spinal origin, or that the nervous system is at fault; by others, a blood disease, and to depend on the formation of lactic acid in that fluid. Gout certainly results, when of long standing, in a de-

posit of urates in the joints. By microscopic examination of the fluids, these substances can be detected. We believe these diseases will eventually be traced to their origin, by chemical and microscopical investigations.

Of the various tumors, comprising the fibrous, cartilaginous, bony, adenomatous, and cancers in their various forms, it suffices to say that great advances have been made in the past few years, in regard to their diagnosis, classification, prognosis and treatment, through microscopic examination. Not only for scientific purposes are these results valuable, but they also afford reliable data, upon which intelligent treatment can be given. For instance, a tumor in certain regions, if not malignant, could be removed, and thus effect a permanent cure. If determined by the microscope to be cancerous, removal in some cases would be abandoned, as not only useless, but unjustifiable, in view of its liability to return and the severity of the operation. Again, in other cases, if extirpation were thoroughly performed on its first appearance, the life of the patient might be saved thereby.

The diseases of the blood in which its normal constitution and the number and proportion of its globules are affected, as anæmia, chlorosis, pernicious anæmia, and leucocythæmia, are readily determined by the microscope and chemistry. The result of treatment can also be observed from time to time by examination of that fluid. We would not, however, affirm, as a recent observer has done, that the character of a person's constitution can be told by the examination of the pus, or white blood-cells, and his natural longevity determined. Nor do we believe, with him, that microscopical examination of the blood should be made in doubtful cases before marriage is permitted.

In diseases of the nervous system, examination of the excretions may afford aid in the diagnosis. The post-mortem examination of the structures may also assist us in obtaining a knowledge of the natural history of the disease.

In diseases of the eye, we will mention nephritic retinitis. To those familiar with the use of the ophthalmoscope, this instrument alone will generally suffice, in advanced cases, to complete the diagnosis. But, in some subjects of syphilitic retinitis, without well

marked constitutional symptoms, with an obscure history, or where we may not wish to question them closely, an examination of the urine for albumen, and the presence or absence of casts, as determined by the microscope, will often settle all doubts in the case.

In diseases of the ear, we will mention parasitic inflammation of the external auditory canal. This is caused by the growth of different species of fungi, of which at least six kinds have been described. Determination of the species is made by the microscope.

We now pass to diseases of the respiratory system. Here we at once come to pulmonary consumption, the nature of which disease the microscope is believed to have definitely settled, as depending on the bacillus of tuberculosis. The discovery of this organism in the sputa is accepted, as establishing the fact, conclusively, that the patient has consumption. In certain destructive changes in the lungs, by which portions of their structure are expectorated, these can readily be detected on microscopic examination.

Diseases of the digestive system are often better understood by examination of the material thrown off from the stomach, or the excreta.

Diseases of the urinary system. Here is where the microscope has proved of much service for many years. It is of the greatest value; for by it, in connection with chemical analysis and the symptoms, we can often positively determine the disease at the first examination, and thus commence the proper treatment at once. It is of especial service in the diagnosis of inflammaion of the kidneys in their various forms, as acute, chronic, and suppurative nephritis, Bright's disease, and also the different varieties of cystitis.

In diseases of the female generative system, Drysdale's ovarian cells were formerly supposed to be characteristic of cystic disease of the ovary. Extended observation, however, does not confirm this belief.

Diseases of the skin are of vegetable or animal parasitic origin, or dependent on peculiar inflammations of its structure. The microscope will afford us valuable aid in their diagnosis.

In poisoning, by either vegetable or mineral substances, and especially in medico-legal cases, the microscope, with chemistry, affords proof which cannot be controverted.

Lastly, we come to the entozoa, or internal animal parasites, upon which, on account of their great importance and being so little studied, I shall dwell more fully..

There is also a point in connection with this study which is understood by very few persons, and I doubt if many physicians have ever given much thought to the subject. It is this: the study of the internal animal parasites of man cannot be successfully pursued without also including those of animals. The reason of this is obvious, for nearly all of the parasites which have human beings for their ultimate host exist in their embryonic condition in animals, and are generally transferred from them to man, either in their food or through the water they drink.

Still further, we may affirm that some of these parasites have for their final host either man or animals, and the study of their life history in the latter, brings to light all their changes and migrations in the former. The internal organs of man and animals are to these parasites what the world is to us, their own legitimate territory. It is not by chance they dwell there, but by the immutable laws of nature; they have no other mode of life. They even have different organs of the body in which each species preferably lives, like the various animals and plants which inhabit different regions of the earth. Viewed in this light, their study, instead of being a tiresome task, is a pleasant recreation.

The entozoa of man are divided into several classes. Of these, I have time at present to notice only three, viz., the Trematodes or Flukes, the Cestodes or Tapeworms, and the Nematodes or Round worms.

The division of Flukes is separated into six families. Ten species, belonging to four of these families, are found as parasites in man. Among these I shall first notice the common liver fluke. This has been found in only about twenty instances in man. It is common in the antelope, beaver, deer, horse, hare, kangaroo, ox, and in sheep causes that terrible disease called the rot, which annually destroys many thousands of these animals. In its adult condition it is from one-half to one inch long and about one-half inch broad. In its embryonic form it lives in a species of snail, inhabiting wet pas-

tures, and is taken into the digestive organs by sheep while feeding, thence bores its way through into the liver.

Of all the flukes inhabiting man, Bilharzia hæmatobia, the cause of the Egyptian chlorosis or hæmaturia, is the most wonderful. The male measures, in its adult condition, about one-half, the female, four-fifths of an inch in length. The eggs are from the $\frac{1}{180}$ to the $\frac{1}{160}$ of an inch in their long diameter. This parasite inhabits the blood of man and some of the inferior animals. It has been found in various parts of Africa. The blood and urine of the person affected contains not only the parasites, but also an immense number of eggs. These eggs pass out with the urine into the soil, are there hatched, and in some unknown way, either through a bearer or articles of food or water, find their way again into the human host. The microscopic examination of the blood and urine of a person or animal affected, immediately reveals the parasite and its eggs.

We now pass to a class of which we often find examples in our own locality, namely, the tapeworms. The species of this worm are very numerous, one hundred and forty-six having been described. They are found, in the adult condition, only in the alimentary canal of the vertebrate animals, including man. They are most common in birds, next in the mammalia, then in fishes, and lastly in reptiles.

We will first call your attention to the most common species inhabiting man, namely, the beef tapeworm (Tænia mediocanellata). This worm attains the length of from fifteen to twenty-five feet, and is composed of from seven to nine hundred joints. Each of the mature joints contains many thousands of eggs, easily seen under the microscope with a power of fifty diameters. As it exists in beef, it is called measles, from the roughness which it gives to the flesh resembling the eruption of that disease.

The tapeworm is developed in man from these little worms, in their cysts, being eaten in raw or underdone beef. If meat is brought to a temperature of 140° Fahr. for a few minutes, the embryonic parasite is destroyed, and all danger of tapeworm infection prevented. From this, it is easily seen that the eating of raw beef, for certain diseases, is not altogether devoid of danger. The beef measle, when eaten by man, in a little less than two months, as de-

termined by experiments for that purpose, becomes a perfect tapeworm.

The mode in which cattle obtain the measle, or Cysticercus bovis, as it is also called, is from swallowing the eggs in the joint, or free, after they have passed through the human bearer. They may be taken either in feeding or in their drink, and when in the stomach, at once develop, bore through the walls of the alimentary canal, and find their way into the muscles or other organs, where they become encysted, and await the time when they may be transferred to a human bearer. There is, however, a limit to the period when they will develop after being eaten, for they undergo a calcareous degeneration, in six to eight months from the time they are encysted, and may then be taken with impunity. Therefore, it follows, if cattle which are affected with the parasite are kept for somewhat less than a year, without new infection, their flesh is entirely harmless, even when eaten quite raw. But a sure preventive is to have all your beef thoroughly cooked.

The pork tapeworm (Tænia solium) was formerly supposed to be the most common, but exact research has determined that such is not the case. Its larval form is named Cysticercus cellulosæ. The natural history and prevention of this tapeworm are quite similar to that of the beef tapeworm.

We will here say that the adult beef and pork tapeworm often produce serious disease, and sometimes death, in their human bearer; but the larvæ or cysticerci of the pork tapeworm are far more dangerous. They are developed in the various structures of a person, as they are in an animal, from swallowing the eggs. Their presence in the brain may give rise to mental derangement or epilepsy, and about one hundred cases of death from this cause have been recorded. In the anterior chamber of the eye, the Cysticercus cellulosæ has long been known to oculists. The Cysticercus bovis has never, to my knowledge, been found in the human body.

The cat is the host of at least five species of tapeworms, among them one called Tænia crassicollis. This is derived from eating the Cysticercus fasciolaris in the liver of rats and mice. The dog has many parasites, both of the tape and round worms. There is one kind called the cucumerine tapeworm which has, as its intermediate

host, the louse of the dog, which swallows the eggs of this tapeworm after they escape from the dog. In the body of the louse the six-hooked embryo of the tapeworm becomes transformed into a minute cysticercus or louse measle. The dog, irritated by the lice, frequently bites and swallows them and thus becomes reinfected.

But there is one tapeworm of the dog which becomes the cause of serious disease in the human family. I allude to the Tænia echinococcus, a small tapeworm, only about one-fourth of an inch in length, and composed of three joints and a head. That this tapeworm is worthy of notice, will be acknowledged, when it is known that nearly one-sixth of all the inhabitants dying in Iceland fall victims to the hydatid disease, caused by the cysts of this tapeworm. Its ravages are not confined to that country alone, and doubtless, some cases of obscure disease occurring in our midst could be traced to this parasite. Not only man, but cattle, horses, sheep and swine often perish from the presence of these cysts in their vital organs.

Some of the wonderful resources of nature for the propagation of the species are illustrated in the life history of this worm. The egg, which is about $\frac{1}{370}$ of an inch in diameter, passes through the dog. One of these, swallowed by an animal, hatches, bores through into other structures, and will develop from a single germ, not one, but thousands of embryo tapeworms, within hydatid cysts, sometimes attaining the size of a child's head. These cysts, by their growth, press upon the organs in which they are contained, generally the lungs, liver or brain, and so disorganize their structure and disturb their function that they often cause the death of their host.

The dog becomes infested with this tapeworm, by eating the viscera of sheep, rabbits, or other herbivorous animals, containing these hydatids. The diagnosis of a tapeworm is made by inspection of the passages, in which the segments and eggs can be readily found, and a determination of species made with the microscope.

The last class of worms to which we shall refer are the Nematodes, or round worms.

First, and most formidable among these, in our country, is Trichina spiralis. This parasite is supposed to have the rat as its original host, and the hog to become infested by eating rats, which

are often plenty about their troughs. The flesh of the hog being taken by man uncooked, or underdone, causes the disease.

The trichinæ, after being in the digestive organs two days, attain maturity. The female, after six days more, produces a numerous progeny, a thousand or more to each worm. The young immediately commence to bore through the intestine, and from thence pass to the muscles, where they become encysted in from six to eight weeks.

The diagnosis of trichina in pork is made by examining the muscles with a microscope. In the living human subject a small piece of flesh, generally from the deltoid muscle, is excised by a delicate harpoon-like instrument and examined, when the parasites, if present in numbers sufficient to prove injurious, will generally be found. The full grown male trichinæ are generally about one-eighteenth inch, the female one-eighth inch in length. The only preventive of the disease is to have one's pork thoroughly cooked.

To Filaria Bancrofti, or Filaria sanguinis hominis, we will next call your attention. This parasite was first discovered by Dr. J. H. Salisbury, of Cleveland, Ohio, in 1868. It is, however, far more common in warmer climates, and is supposed, by some good observers, to be the cause of certain forms of elephantiasis, varicose groin glands, and chyluria. The mature parasite is three or four inches in length, and passes out with the urinary secretion. The embryos dwell in immense numbers in the blood, and cause obstructions in the circulation, which give rise to the above diseases.

But a curious feature to be noticed is, that the mosquito is supposed to play the part of an intermediate host, by sucking the blood of the person in which these embryos live. The embryos undergo a transformation and growth in the stomach of the mosquito, and are then deposited by them in water. This water is drank by persons, and the embryos thus taken in by them attain maturity.

A later observation shows that these same embryos are found in the blood of crows in India, and some believe them to be transferred avian hæmatozoa.

Another intestinal worm which is the cause of a tropical chlorosis, is called Dochmius duodenalis. This worm, which is about one-half inch long, attaches itself to the mucous membrane of the

intestine, and lives upon the blood of its host. It is found in Italy, Egypt and South America.

Our common pin-worm (Oxyuris vermicularis), although not dangerous, is exceedingly annoying. The perpetuation of the species is believed to take place by means of swallowing the eggs conveyed to the mouth by the hand, which has been used to allay their irritation.

The common round worm (Ascaris lumbricoides), inhabits the intestines of not only persons, but, also, the hog. It is by means of this animal, without doubt, that persons are often infected, the eggs or embryos being taken in the water they drink. I have often noticed that children are affected by this parasite more frequently when they use drinking water from creeks and springs near their houses, about which hogs are allowed to run.

At a late meeting of the French Association for the Advancement of Science, the view was expressed by some of the members, that the blood of healthy people contains pathological germs, which only require favorable conditions to greatly multiply, and thus cause disease. While we would not be understood as accepting this view, it certainly opens up a wide field for original research and investigation.

Many more illustrations of the use of the microscope in medicine might be given, had we time. I trust, however, these are sufficient to awaken a lively interest in all who have not been accustomed to rely on this instrument for aid in the diagnosis of disease.

WHAT'S IN A NAME?—A young woman from the Emerald Isle occupies the position of a domestic in a mansion in the vicinity of the Homœopathic Hospital in this city. A few days ago a friend called, when the following colloquy ensued: "And aren't yez homesick, Bridget?" "Homesick! No; why should I be homesick?" "Bein' away from home, and everythin' so strange loike." "Faix, then, it's the same as if I was at home, I feel. Isn't the fine hospital, the Home o' Patrick, close on there beyant?"—*Boston Courier.*

Doctor—"Good-morning, madam! glad to see you looking quite well again."

Lady—"Yes, doctor; I put on the compress and took the prescription; but I don't think they did me any good."

Doctor—"Ah! sorry to hear it. May I inquire why?"

Lady—"Why, because in a couple of days the cold all went off of itself."

SPONGE-GRAFTING.

By B. G. Long, M. D.,
Buffalo, N. Y.

[Read before the Physicians' Club.]

Sponge-grafting is of very recent origin, and as yet has been mentioned in very few of our text-books, and but meagerly discussed in our journals. Enough, however, has been written to attract the attention of the profession, and from the success that has attended its use in the past, we predict for it a prominent place in the list of surgical measures.

Its place in surgery is (in part at least) to supersede skin-grafting (an operation familiar to all, and one that has greatly reduced the suffering of poor humanity) by attaining certain ends in a much shorter period of time.

In this busy age time is more than money, and especially among the poorer and laboring classes, where every day's work means additional necessaries and comforts for dear ones, it is desirable that means may be employed that will materially shorten their periods of idleness.

Sponge-grafting differs from skin-grafting in being applicable to very many cases where the latter could not be employed. It resembles skin-grafting in being intended to accomplish the same ultimate results and in being applied and redressed in about the same manner.

Dr. J. D. Hamilton, of Edinburgh, in articles published in the *Edinbgurh Medical Journal* of November and December, 1881, first described sponge-grafting.

I have been unable to obtain the journals containing these original articles, but from extracts from them, published in other journals, the following facts in regard to the preparation and application of sponges have been ascertained:

Fine surgeon's sponge is soaked in dilute nitro-hydrochloric acid, to dissolve all of the silicious and calcareous salt, washed in liquor of potassa until all the acid is dissolved or neutralized; afterward washed in distilled water, pressed dry, and soaked in a 1 to 20 solution of carbolic acid and water.

When sponge so prepared is thoroughly carbolized, it is ready for use.

In the application, they are sliced thin and applied over the surface of the ulcer, where there is not much loss of tissue; and where deep ulcers exist, pieces are to be accurately fitted to the chasm, without rising above the edges.

The grafts are then covered with protective silk, fixed by strips of plaster, and over this absorbent cotton or carbolized lint secured with a bandage. It is usually not disturbed until the fourth or fifth day. The dressings are then removed, surface thoroughly irrigated, and if any of the pieces are loose, they are to be replaced by fresh ones, and redressed as before. The frequency of subsequent dressing will depend upon the amount of discharge and the patient's general condition.

I will review a few cases from different journals and one case that came to my notice.

A case was reported by Dr. Norman Porritt in the *Edinburgh Medical Journal* for May, 1882, which is as follows:

A boy, fourteen years of age, had fallen against a revolving drum, and his right cheek presented an oval charred cavity, four inches long, and two inches in the greatest breath. The cavity had the appearance of a burn, the result of the severe friction to which the surface had been exposed. A piece of sponge, prepared according to Dr. Hamilton's directions, was accurately fitted to the cavity, without rising above the edges. Protective silk was laid over the sponge, and the whole secured with plaster. Boracic lint and wadding and a bandage completed the dressing.

On the fourth day a small granulation was found protruding through the upper portion of the sponge. On the ninth day the sponge was completely concealed by the granulations, but could be detected by displacing the latter with forceps. On the fifteenth day the whole of the sponge had disappeared, with the exception of a few small particles. Its place was occupied by healthy granulations, at the border of which cicatrization was taking place. On the nineteenth day the wound was only three-fourths of an inch long and one-fourth of an inch broad, and was rapidly cicatrizing.

In the records of the Boston City Hospital for 1882 are found

several cases, some of which were benefited and some not. The first, a Swede who had suppurating buboes of long standing, with large cavities in the groin, the result of sloughing. Tonic treatment was employed, and after a healthy granulating surface was obtained, sponge-grafting was resorted to. In six weeks the patient was discharged, ulcer nearly healed, with no puckering of the skin over the site of it.

Another case was a woman seventy years old with chronic leg ulcers of fifteen years standing. Poultices were applied for a week, when the surfaces of the ulcers were quite clean, and covered with pale, indolent granulations. Sponge-grafting was employed; in one month the patient had so far improved that she was discharged.

After her discharge she immediately began walking about. Swelling of the legs followed, which she attributed to the presence of the sponges. She tore out as much as possible of the sponge and left her legs in as bad condition as before treatment.

A third case, a boy 16 years of age, had the femur amputated at the junction of the upper and middle fourth, for necrosis of the lower three-fourths of the shaft. After the vessels were all tied there was continuous hemorrhage from the femur which would evidently prevent union by first intention. A carbolized sponge was pressed into the bone, pushing back the marrow, and cut off level with the bone. This controlled the hemorrhage perfectly.

The stump was dressed antiseptically, and almost entire union by first intention was secured.

A fourth case, a woman 35 years of age, had a large medullary cancer of the breast with the axillary glands involved. The breast and glands were removed, leaving a denuded surface about six inches in diameter. A sponge was applied about three weeks later, but the wound healed very slowly, and it was thought the sponge did not facilitate the process.

In the *Medical Record* for Oct. 1882, Dr. J. Burnett, of Carbondale, Pa., reports a case of successful sponge-grafting, the principal points of which are as follows:

A young man of 23, who was very anæmic, and who had been enjoying only moderately good health since a severe attack of pleuro-pneumonia, 5 or 6 years previously, was suffering with a large

abscess at the junction of the tenth, eleventh and twelfth ribs and their cartilages, which was opened in May, 1881. Counter-openings were made, drainage tubes inserted, and the cavity kept thoroughly washed out; stimulating treatment in the shape of cod-liver oil, quinine and iron was employed continuously.

The pus burroughed in several directions. Nitrate of silver and iodoform were used to check and prevent burroughing, but to no purpose. The sinuses were laid open and packed with balsam of Peru, but still the destruction continued. This state of affairs lasted seven months. The patient was so weak that it seemed impossible that he could be restored to health, was sweating profusely, and during the last three weeks of this time his temperature had ranged from 97.5° to 106° Fahrenheit.

He was now too weak for any cutting operation, although six sinuses existed. At this juncture Dr. Hamilton's articles on sponge-grafting were given to the profession. Immediately on reading them, Dr. Burnett proceeded to give it a trial.

Sponges were prepared after Dr. Hamilton's method, with this exception, carbolized oil was used instead of carbolized water. The sinuses varied in depth from three-fourths of an inch to two and one-half inches, and in breadth from one-twelfth to one-half inch. Two of the shallowest were tried first, the sponge being very carefully fitted into the cavities, a compress of carbolized wool being placed over the openings, and secured with a bandage drawn tight enough to make moderate pressure. One graft became adherent on the fourth day, and the other on the fifth. On the sixth day the grafts bled when pricked, and in three weeks from the introduction of the sponges, the two sinuses were healed firmly.

The other openings were filled with sponges, but in three of the four failure occurred on first trial, owing to the difficulty of fitting the sponge accurately to such long and narrow sinuses. The longest sinus, two and one-half inches in depth, was grafted three times before union took place. In this sinus the cartilage of the eleventh rib was denuded, and the sponge would not adhere to it. This was irritated and healed by granulation when the patient's strength had improved.

In one shallow ulcer, one-eighth inch in depth and one-half inch

in diameter, the sponge did not unite nor become organized, but it stimulated the ulcer to healthy action and healed it.

In the *Medical Record* for May, 1883, Dr. W. G. Thompson reports a case where success was attained under very trying circumstances. A man admitted into the Bloomingdale Insane Asylum, suffering with acute mania, had a very entensive excoriation involving nearly the entire lumbar region, being the result of a blister applied by his wife a few days before his admission.

At a point a little above the left buttock a deep and extensive slough was formed which separated in a few days leaving a granulating ulcer with sloping sides one and a half inches deep, two inches wide and three and one-fourth inches long. As the patient's temper was none of the best, it was important that this source of irritation should be removed as soon as possible.

Sponge-grafting was accordingly resorted to. Not having time to prepare sponges according to Dr. Hamilton's directions, ordinary fine grained sponges were used, after having been soaked in 1 to 20 carbolic solution for twenty-four hours.

From the periphery of this sponge pieces from one-fourth to one-third of an inch square were cut and closely applied to the floor and sides of the ulcer. The peripheral surfaces of these pieces were placed in contact with the ulcer, because the spiculae are larger and more branching there than in the interior, and consequently the fragments are more likely to adhere like burrs until the granulations can grow into them. The wound was cleaned with carbolic acid solution, 1 to 40, and powdered with iodoform.

A compress was placed over the grafts and a bandage applied. Next morning the patient had torn off the dressing and only one graft remained *in situ*. The grafts were replaced, and, instead of a bandage, broad strips of adhesive plaster were employed, to secure the compress.

The wound discharged pus freely for the first six days; it was cleansed with carbolic solution, 1 to 40, and the dressing renewed every twelve hours. After this it was only necessary to reapply the dressing once in twenty-four or thirty-six hours. Owing to the restlessness of the patient, some of the grafts had to be replaced, but at the end of a week they were all firmly adherent,

with granulations distinctly seen at the edges pushing their way into the interstices of the sponge, and forming little bridges from the walls of the ulcer.

At the end of a fortnight the sponges had been raised to a level with the surrounding integument, and most of them had become very much smaller, while one or two seemed to have been completely absorbed. After three weeks the ulcer had almost entirely healed. From the situation of the ulcer and the restlessness of the patient, who was constantly walking about, it would have been impossible to maintain the grafts in position had they not early become very firmly attached.

The healing was no doubt completed in less than half the time that would have been required without the support and stimulus afforded by the grafts; and had the sponges been elaborately prepared the results could not have been more satisfactory.

A paper on sponge-grafting was read by Dr. F. L. Matthews of Springfield, Ill., at the annual meeting of the surgeons of the Wabash, St. Louis and Pacific Railway on June 4, 1883, and published in the *Chicago Weekly Medical Review* on the 16th of the same month, in which he favors very highly the procedure, and thinks it applicable in many cases of railroad surgery. Especially does he think it applicable to wounds where healthy bone is entirely denuded, as it acts as a trellis for the granulations to bridge over the chasm.

He contends that to have the best results it is necessary to employ the full Lister antiseptic dressing over the grafts, and that the condition of the ulcer determines largely the manner of application. Where proliferation or increase of tissue is demanded, the amount of sponge necessary will be greater than where cicatrization is the sole object.

He reports that those who have enjoyed a more extended experience in both skin and sponge-grafting, find that when cicatrization is the object, a very scattering application is all that is required, each producing a center, from which soon springs a preceptible band, that meets a similar one from its neighbor, dividing the surface into areas, dependent in shape upon their mutual relation; while all observers assert that their use is immediately followed by an increase of activity at the edges.

In a paper on sponge-grafting by Dr. Edward Borck, of St. Louis, read at the tri-State medical meeting at Indianapolis, Sept. 19, 1883, and published in the *Chicago Weekly Medical Review* for Nov. 3, 1883, two methods are given for the preparation of the sponges. A fine sponge is soaked four or five days in a 20-per cent. solution of hydrochloric acid, squeezed dry, and put into or saturated with a mixture of one drachm of iodoform to one ounce of sulphuric ether, for a day or two, air-tight; after this the ether is evaporated, and the sponge is ready for use, and is kept in an air-tight vessel. The second method is to put the sponge for a few days in the 20 per cent. solution of the acid, then remove it, and preserve it in carbolized castor oil of 10½ per cent. strength, ready for use.

The first case given by Dr. Borck was a gentleman who had indolent ulcers on his left leg for eleven years. There was no history of specific disease. An injury was given as the first cause. The patient was very much depressed in spirit, as everything (rubber bandage included) had been tried in vain. He was put upon alterative treatment, with good diet and rest, the ulcers were sprinkled with iodoform and covered with some simple dressing. The ulcers very soon put on a healthy appearance, when sponge-grafting, with some prepared by his first method, was employed, with the best possible success, as they healed very rapidly and firmly.

Another case, a lady patient, was suffering from the sequelæ of syphilitic infection, "primary sore received six years previous." When first seen the whole left gluteal region was eaten out; thin watery, offensive matter ran from that and other sores that were scattered here and there; her throat was also ulcerated.

She was placed upon constitutional treatment for several months, when her general condition was much improved, and the sores began to look healthy. Sponge-grafting was then employed and the result was almost marvelous. It seemed that the whole gluteal muscle was reproduced with strong skin covering it.

A third case was a man who fell off from a railroad train, tearing nearly the whole skin from the dorsal side of his left hand, leaving all of the tendons exposed. Fearing contraction, the wound was thoroughly cleansed, hemorrhage controlled, and immediately covered with sponge-grafts, using antiseptic gauze over them.

After four or five days the dressing was removed; no suppuration, granulating nicely. A few pieces of loose sponge were cut off and replaced by new. By continuing this process the wound was quickly healed, securing a broad and pretty firm cicatrix. The hand was kept in the flexed position all of the time.

Dr. B. also mentions his having seen old contractions, following burns, very greatly benefited by making transverse incisions and filling them with sponge. He thinks the main advantage gained by sponge-grafting in flesh wounds is to prevent contraction.

Dr. David S. Booth, of Sparta, Ill., in a paper read before the Illinois State Medical Society, May 10, 1884, reported several very successful cases of sponge-grafting. The paper is published in full in the *Chicago Weekly Medical Review* of July 5, 1884.

Two of the cases were gunshot wounds in young men, received by the accidental discharge of their guns. The wounds were both in the same region, and very similar; one, however, being much more extensive than the other.

The gun which made the larger wound was loaded with turkey shot. The charge entered the soft parts at the middle and lower part of the axillary border of the pectoralis major muscle (right side), and passing upward, backward and a little inward, passed out between the scapula and clavicle, apparently missing both bones. The soft parts from the entrance to the exit, about six inches, being severely lacerated, and a portion of the structures, the entire length of the wound, being carried away, a large opening existed.

Conservative treatment was employed until the wound had been thoroughly cleansed by suppuration and sloughing, and healthy granulations were abundant. The whole wound was then filled with sponges, and in forty-nine days the whole gap was filled up. One month later a portion of the clavicle separated and came away, and several months later the head of the humerus; but firm, bony anchylosis was formed between the scapula and humerus, and fourteen months after the injury the arm was nearly as serviceabe as before.

He also mentions a case where sponge-grafting was very efficient in the treatment of malignant pustule.

The case that came to my notice was that of a boy nine or ten years of age who had received a very extensive burn by the explosion of two packs of fire-crackers in his pants pocket, which ignited his clothing. He lived some distance out of town and was seen by Dr. Harrington at intervals in consultation with the physician in attendance. It was a very tedious case, as extensive burns always are. For months there was very little change in the patient's condition, or the aspect of the wound. After a time the patient's health began to fail perceptibly.

After one of Dr. H.'s visits, when the patient's condition was very discouraging, I suggested sponge-grafting. Sponges were accordingly prepared after Dr. Hamilton's method and applied. The wound appeared to be stimulated thereby, granulations sprang up, and the sponges became organized. For a time it seemed as if the sore would heal, but the procedure was evidently employed too late, as the patient soon after began to fail rapidly, and died about fourteen months after the receipt of the injury.

More cases might be mentioned; the foregoing are deemed amply sufficient to show the variety of cases in which sponge-grafting may be profitably employed. In all cases where skin-grafting has been used in the past, sponges may be used with every prospect of success, the application of the grafts is less delicate, and does not necessitate the suffering of the patient or others, as is the case with skin-grafting in the procuring of the grafts.

Reverdin, in 1872, claims to have seen little epidermic islands springing up spontaneously in certain wounds, and says he was prompted by that to try skin-grafting. There are others who hold that skin may be proliferated in this manner. If this is a fact, sponge-grafting may, in addition to stimulating and draining a wound and forming a trellis for the granulations to climb upon, cause islets of skin to be started at points over the surface of the wound. This position seems to me fallacious, for spontaneous generation thus far has not been proven, and throughout nature's broad domain the law that like produces like is unchangeable.

In some cases of indolent ulcers, sponge-grafting has been used with excellent results. Here it undoubtedly acts by draining and stimulating the sore and also by causing moderate pressure. It is

certainly worthy of a trial even in cases that are very unpromising, as no harm can come from its use, and some ulcers have been healed in which all other measures failed. In ulcers over the tibia, where there is usually no cushion of soft tissues under the cicatrix, it may be the means of causing more tissue to be formed over the bone, and thus lessen the risk of subsequent return through injury.

It is especially beneficial in cases where much tissue has been lost; here it serves as a trellis for the granulations to climb upon, and prevents unsightly and inconvenient contractions which otherwise are unavoidable.

Clinical Lecture.

A CASE OF OESOPHAGEAL DIVERTICULUM.

BY ROSWELL PARK, M. D.
Prof. of Surgery, Med. Dep't., Univ. of Buffalo.

[Delivered at the General Hospital, October, 1885.]

Gentlemen: By the courtesy of Dr. Eli Long, I am able to show you to-day a case not only of extreme rarity but also of great pathological and clinical interest. As the case has been for some months under Dr. Long's observation, I will read the history, with which he has kindly provided me:

"C. W., aged 20, cigarmaker by trade, but has not worked at it since December, 1884. Has never been strong. Has been ailing for three years, with symptoms referred to the digestive apparatus. He came under my observation February 14, 1885, complaining that he could not retain his food. He was somewhat emaciated and weak, weighed 99 lbs., with pulse 114, and temperature about normal. His food was regurgitated rather than vomited, and he designated a region at the right of the sternum, on a level with the nipple, where he said his food and drink seemed to remain instead of going into the stomach. He would experience pain in this region, until regurgitation occurred, which was generally soon after eating. These symptoms were sometimes very bad, and at other times not so distressing. His heart sounds and respiratory murmur were normal. His bowels were irregular, appetite fair, and urine normal. He informed me that he had been treated by several physicians, without any permanent benefit. His symptoms led me to consider the case as one of "regurgitative disease," so termed by Sir Henry Marsh.*

* Habershon, Diseases of the Stomach, 3d edition, p. 220.

Accordingly he was ordered to take systematic exercise, cool baths, and tonics in form of elix. calisayæ, and liq. potassii arsenitis, the latter in two-drop doses before meals. Three weeks later he reported a gain in weight of four pounds, and symptoms somewhat improved. The improvement, however, was not permanent, and he soon ceased taking exercises in the gymnasium, and after several changes in medication, with no benefit, that also was discontinued. He was able to walk about and do some work, but at times his trouble would be so bad as to render him unable to do anything. Was called to see him again on July 9th, and found him rather weaker than usual, having been unable to retain much of anything for several days. From a careful study of his swallowing and regurgitation at that time, I was led to the conclusion that the trouble must be in the œsophagus, and that, as the patient thought, the food was rejected before reaching the stomach. Anything that passed down into the stomach was retained and digested. It occurred to me that the trouble might be a spasmodic stricture of the œsophagus. On the next day I took the patient to see Dr. Park in consultation. At this examination he passed a good-sized œsophageal bougie into the stomach, without the slightest muscular resistance, which rather set aside the idea of a stricture. After a careful further study of the case, Dr. Park's diagnosis was that of diverticulum of the œsophagus to the right side. The prognosis was accordingly unfavorable. Feeding for a time by means of the stomach tube was recommended, but was rejected by the patient. Seeing him several days later, he said he felt better since the examination, and had been able to retain nearly everything he took. Since then, however, he has been about as before, although at the present time his appearance is better than six months ago. I may add that his pulse is now steadily 90, and his temperature normal."

Such is the succinct account of the case. Let us now study the means by which we may arrive at a diagnosis. Judging from its history we have here to differentiate between the following possible affections :

Œsophageal stricture, either cicatricial or malignant.

Malignant disease of the stomach.

Œsophagismus, possibly of hysterical origin, and including also "regurgitative disease."

Anatomical anomaly.

A non-malignant œsophageal stricture would be produced either by cicatricial contraction following an ulcer or some traumatism, or by syphilis. In this case there is no suspicion of syphilis. Neither do I get any history, on careful inquiry, that the patient ever swallowed any caustic acid or alkali, nor any foreign body, which might have led in any way to the formation of an annular cicatrix. Moreover,

bear in mind that I passed, with ease and without pain, an œsophageal bulbous bougie down into the stomach; and as the greatest diameter of its bulbous portion was a centimeter and a half, this fact negatives all possibility of actual stricture.

As a rule we do not find cancerous strictures at his age; he, moreover, has not the cancerous cachexia; he is emaciated from lack of ample nourishment, but he has no cachexia. Neither does he complain of that pain between the shoulders which patients with cancer of the œsophagus usually though not invariably have.

Cancer of the stomach is equally improbable at his age; the character of the vomiting as well as that of the ejecta, and the absence of tumor in the gastric region, make it so unlikely that he has any such trouble that we may leave out this hypothesis in the further consideration of the case.

We may have, occasionally, to deal with spasmodic affections of the œsophagus, which are akin to vaginismus, which are usually of hysterical origin, and which are characterized by intolerance of any foreign substance, with convulsive efforts directed to its immediate extrusion. If it were possible to imagine a bolus of food carried down nearly to the lower end of the gullet, then, in this condition, it would be hastily, and even violently propelled into the stomach; but, by the nature of things, food entering first the upper end of this peculiarly sensitive canal is rejected in the direction of least resistance and speediest exit, and hence it is regurgitated before it has been half swallowed. Now, this regurgitation follows quickly on the attempt at deglutition, while in our patient here it does not appear that such is the case; moreover, the patient's temperament is not such as to lead us to suspect any hysterical condition, and his trouble has lasted for years.

Let us see, lastly, whether there is reason to suspect any variation from the anatomical standard, and whether such, if present, would account for his present symptoms. The young man is intelligent enough so that we can trust his own statements to at least a certain extent. He is confident that much of the food he swallows never reaches the stomach, and he has reached this conclusion from no small self observation. He is conscious of an unpleasant fulness in the locality described by Dr. Long, which sensation is relieved after

rejection of a certain amount of food. If, now, there were a sacculation or a diverticulum in connection with the œsophagus, its presence would explain every one of the symptoms of which he complains. When I examined him I got him to drink some fluid, and then, carefully percussing the thorax, I made out anare a of dulness near the middle line, on the right side, a little above the level of the diaphragm. After having provoked the act of vomiting by passage of the bougie, I again percussed this region and could detect no particular difference. This was the region to which he refers his unpleasant sensations. After the introduction of the bougie, whose point fortunately did not catch in any false passage, he was more comfortable for several days. This fact is easily explained on the supposition that its good-sized bulbous portion pressing on this sacculation so emptied it of its contents—and some of these were drawn up with it—that it was nearly completely collapsed.

Knowing, then, the possibility of such a lesion, from a process of exclusion and by aid of a few of the rational signs and symptoms of the case, I was able to make a diagnosis of œsophageal diverticulum.

It remains for me, then, to tell you something concerning these diverticula. Such offshoots from the intestine are not so very rare; but appendices of the œsophageal tube, of congenital origin, are of extreme rarity. As met with in adults, such cases naturally fall into two categories: the *congenital* and the *acquired.* As stated, the former are very rare,—so rare, in fact, that only a very few are on record. The symptoms of such congenital trouble would not differ from those of the acquired forms, save that they would appear much earlier.

Of the *acquired* forms, we have two varieties, which, following Zenker, we may designate the *pressure* and the *traction* forms. Of these the former is much the more rare. They result from injury to some point in the pharyngeal or œsophageal wall, or from a local paralysis. Let there be once a loss of resistance of a given spot within this muscular tube, then, with every effort at deglutition, the morsel swallowed will be pressed against this weakened point, thus putting it on the stretch. Thus repeatedly put on the stretch for hundreds and thousands of times, it naturally yields. As soon as the small sac thus formed is large enough to hold anything, it will

act just as does a sacculation in the bladder. It will constantly contain a residuum of fermenting or putrefying food, and it will enlarge with greater comparative rapidity. In fact, it is now only prevented from rupturing by the support of the tissues in its neighborhood; were it not for such support, dilatation would occur much more rapidly than it actually does. As the sac becomes larger, its connection with the œsophagus will become larger, too, and thus an ever-increasing proportion of food will "go the wrong way," and a certain amount of this will soon be regurgitated.

Traction diverticula are brought about in a different manner. Their formation depends upon some pre-existing change in parts adjoining, and usually in the bronchial glands. Let us suppose that from any cause—usually tuberculosis—one of these glands, having been inflamed, contracts adhesions to the œsophageal wall. If, now, this gland should practically collapse, or shrink up and calcify—as in reality these glands often do—it would naturally draw the œsophageal wall along with it. Once drawn out of shape and its natural muscular action at this level interfered with,—in other words, once the sacculating process be begun,—the process goes on as before described. Should we have a mediastinitis or a suppurating bronchial gland, this result might follow with even greater ease. In fact, the lesson I would have you learn from consideration of these possibilities is this: a vicious process once started, leads ever to more and more pronounced changes, and one can scarcely say what extensive alteration may not result from it.

Recurring now to our case, and endeavoring to assign it to its proper place in the classification given, I feel that we must put it among the traction diverticula. The symptoms have come on since he can remember events, consequently it can hardly be of congenital origin. On careful enquiry no account can be obtained that he ever swallowed any substance or chemical that could have led to the pressure form. Enquiry is equally fruitless as to signs of previous intra-thoracic inflammation; nevertheless it may have easily happened in his childhood. So, without being able to assert it positively, I should say that we had here to deal with a traction diverticulum.

As far as differential diagnosis is concerned, it seems to me to

have been sufficiently outlined in what I have already said to you. It is never to be jumped at, but must be reached by a process of exclusion. Not every case of regurgitation of food will prove to be caused by such an anomaly as we have met with here.

Concerning prognosis and treatment there is also but little to be said. The prognosis can be scarcely considered good, nevertheless there is no knowing how many years of life this young man may yet enjoy—if it can be called enjoyment. This lesion may kill him by a simple process of starvation, *i. e.*, he may die at some future time of inanition; or possibly his œsophageal sac may burst, when its residuary contents would set up a mediastinitis which would probably prove fatal within three days. If a non-flexible œsophageal sound were carelessly passed, it might engage in the sac opening and then forcibly rupture the sac. In spite of this possibility it would seem that the occasional careful passage of a flexible, olivary probang, combined with feeding through a tube, would give him more relief than anything else. Obviously, medication is useless here. Finally, I can imagine that there may come a time when in order to prolong life it may be advisable to make a gastrostomy, that is, a permanent opening into the stomach, through which food might be introduced as a matter of regular habit. Such an operation could be performed in this case with every prospect of success, provided only it were not delayed too long.

STRICTURE OF THE LARGE INTESTINE.

Dr. C. M. Woodward, of Batavia, sends us an account of a case of stricture of the colon, which finally proved fatal from rupture of the small intestine above it. The patient was a married woman of sixty-eight, who had for years suffered from periodical sick headache, and occasional attacks of nausea and vomiting. July 19th: she was seized with severe pain in the abdomen, for which laxatives were first prescribed, and later morphia. Early in the progress of the case he made a provisional diagnosis of intestinal stricture. She was seen by other physicians, who held it was only fæcal accumulation, but there were at no time present the usual evidences of such retention. His own diagnosis was confirmed by Prof. E. M. Moore. Laparotomy was contra-indicated by the surroundings and the patient's general condition. Copious and often repeated injec-

tions were without avail, as was everything else that was tried. Stercoraceous vomiting occurred frequently; tympanitis, which was early in the case only annoying, became later most distressing. From the thirty-eighth day the use of the catheter became a daily necessity, the urine containing biliary coloring-matter. Relief from pain was to be obtained only by continuous hypodermic use of morphia.

On the evening of the *fifty-sixth* day she was moribund, and while his hand was on her distended abdomen, she gave a scream and expired. At the same instant he felt something "give" under his hand, and was confident that rupture of intestine had taken place.

At autopsy rupture of the cæcum at the location of the ileo-cæcal valve, was discovered. Six inches of the ascending colon were found almost obliterated, the remaining canal being barely patulous enough to permit the passage of a fine probe, and the intestinal wall being very thick and indurated. Inquiry into the patient's early condition elicited the fact that, when a young woman, she had barely recovered from a very severe attack of dysentery, and had passed not only blood, but numerous pieces of sloughing mucous membrane.

THE BOY AND THE BONE-SETTER.

Speaking of bone-setters recalls a good story which occurred in the north of Scotland, where one of them had risen to great fame and no small fortune by his skill. A country lad, residing a few miles off, had got his leg hurt at one of the local factories, and had been treated for some time by the local medical man without any good result. His mother, who had great faith in the neighboring bone-setter, wanted the lad to go to him, which he declined, preferring, as he said, the "reg'lar faculty." Eventually, however, his mother's persuasions prevailed; and he agreed to allow himself to be taken to see Daniel R., the bone-setter. A bed for the invalid was extemporized on a cart; and, accompanied by his anxious mother, he was, after a rather painful journey, taken to the town where the bone-setter resided. The leg was duly examined, and it was found necessary to haul it very severely, in order, as the bone-setter said, "to get the bone in." The lad was liberal with his screams while this was going on; but eventually the bone was "got in," and he was told to go home, and in a few days he would be all right and fit for his work. He was lifted upon the cart again, and, with his mother seated beside him, set off for home. "Didn't Danny do the thing well?" said the joyous old lady. "Yes, he did, mother," said the lad; "but I was na sic a fool as to gie him the sair leg." The "reg'lar faculty" will, we have no doubt, appreciate the story.—*Whitehall Review.*

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BUFFALO, N. Y., FEBRUARY, 1886.

RECENT ADVANCES IN THE SURGERY OF THE BRAIN.

Mr. Symonds has recently trephined for the ligation of the middle meningeal artery, and the removal of a clot caused by its rupture. While his case was not a permanent success, it yet demonstrated the propriety of the procedure, and might have served as a text, had other cases been wanting, for a few comments. Fortunately such cases are by no means rare, and our only comments are in favor of early operative interference.

Considerable literature has recently appeared on this subject, and we consider that it will so grow in importance that before long it will be universally considered *the* thing to operate early, and that remarks will only be excited when this dictum has been neglected.

For instance, in the twenty-first and twenty-second volumes of the *Deutsche Zeitschrift für Chirugie*, Wiesman has a continued paper of 226 pages, in which he gives over 300 cases, never before published, most of which were observed at Krönlein's Zürich clinic, 278 cases of which, with nearly half the text, are devoted solely to the surgery of the middle meningeal artery.

After a review of its topographical anatomy, he gives the following causes of injury: Direct wound by sharp objects; laceration by projectiles or bone spiculæ; rupture by changes in relative situation of neighboring bones; rupture without fracture of bones, oc-

curring especially on the side opposite the injury. Rupture having occurred, commotion may retard the formation of clot, but it will form sooner or later. It may even putrefy without visible exposure to the air.

Symptoms of this accident are: An interval of consciousness following injury before supervention of somnolence, sopor and coma; these are sometimes preceded by irritation symptoms. These compression symptoms may occur at any time after hemorrhage begins, from fifteen minutes up to eleven days. Hemiplegia on the side opposite the injury, the artery being right over the motor centers for the opposite arm and leg; changes in the pulse, infrequency and hardness; slow, embarrassed, stertorous respiration; vomiting; loss of reaction to light of the pupil on the same side as the clot; occasional unilateral impairment of sensation; aphasia; disordered bladder and rectum; rise in temperature. If the first four of these symptoms be present, the diagnosis may be regarded as sufficiently accurate to justify operation.

The gradual supervention of aphasia indicates extension anteriorly of the clot, disorders of sensation its extension posteriorly, while paralysis of the third pair means that it has extended toward the base of the brain.

The surgeons of our country are not yet a unit on the subject of early trephining, or what may be called the early, explorative use of the trephine. A few of the most conservative still hold that it is employed too often, but their number is fast diminishing, and their ranks are not being recruited. On the other hand, the majority of them now hold that inasmuch as the operation is, *per se*, when properly performed, one of very small danger, we are likely to gain more than we shall lose by employing it for purposes of exploration when in doubt. This is the ground taken by Professors Gunn and Briggs, in papers which have had many readers, by Pilcher in his admirable manual on the Treatment of Wounds, by numerous others on this side the Atlantic, and, recently, notably by Dr. Roberts, of Philadelphia. He, in a notable address before the American Surgical Association (now published separately,—*vide* our Book Reviews), has given the most excellent summary of the many cogent reasons for the *judicious*, early use of the trephine, which we know of.

It would prolong our remarks too much to speak here of operations for epilepsy, cerebral tumor and abscess, purulent meningitis, etc. In due time it is intended that this journal shall chronicle home cases of varied characteristics in which operations for some of these troubles shall be illustrated and justified by their results. We are tempted, however, to allude in passing to a case seen recently in consultation whose *post-mortem* revelations caused a feeling of poignant regret that the brain had not been explored. When seen the man was comatose with the usual compression symptoms. No history was at that time elicited which seemed to indicate abscess, but his symptoms were rather those of vascular origin. After death, however, an abscess was found in the right hemisphere which might have been easily evacuated—with a prospect of recovery—had its presence been detected. When too late, also, it was learned that the patient had received a blow on the head some months before, the site of the injury having been right over the spot where softening subsequently took place.

While commending Dr. Roberts' monograph to the interested reader, we consider that we are doing a favor to all concerned in quoting his "syllabus of the treatment of fractures of the cranium." Discussion of other indications for trephining may be left for a subsequent occasion:

"Closed Fissured Fractures.

1. No evident depression, no brain symptoms. No operation.
2. No evident depression, with brain symptoms. Incise scalp and trephine.
3. With evident depression, no brain symptoms. Incise scalp and possibly trephine.
4. With evident depression, with brain symptoms. Incise scalp and trephine.

Closed Comminuted Fractures.

5. No evident depression, no brain symptoms. Incise scalp and possibly trephine.
6. No evident depression, with brain symptoms. Incise scalp and trephine.
7. With evident depression, no brain symptoms. Same.
8. With evident depression, with brain symptoms. Same.

Open Fissured Fractures.

9. No evident depression, no brain symptoms. No operation, but treat wound.
10. No evident depression, with brain symptoms. Trephine.
11. With evident depression, no brain symptoms. Possibly trephine.
12. With evident depression, with brain symptoms. Trephine.

Open Comminuted Fracture.

13. No evident depression, no brain symptoms. Probably trephine.
14. No evident depression, with brain symptoms. Trephine.
15. With evident depression, no brain symptoms. Trephine.
16. With evident depression, with brain symptoms. Trephine.

Punctured and Gunshot Fractures.

17. In all cases and under all circumstances, trephine.

NOTE.—In classes 3 and 11 I should be inclined to trephine if the depression was marked, or the fissures sufficiently multiple to approach the character of a comminuted fracture. In classes 5 and 13 I should trephine unless the comminution was found to be inconsiderable."

With these aphorisms to guide him, the practitioner is much less likely to err than when actuated by the unfortunate notion that the trephine should never be used unless its application seemed even to the novice plainly and unmistakably necessary.

THE BRAXTON HICKS METHOD OF TREATING PLACENTA PRÆVIA.

The wonderful statistics of results obtained by the Braxton Hicks method of treating placenta prævia, collected and published by Dr. Lomer, of Berlin, in the *American Journal of Obstetrics*, for December, 1884, have attracted a great deal of notice among obstetricians. So remarkable are they, that published as they were in a special journal, we make no excuse for calling renewed attention to them.

The method, as practiced by its originator, and adopted and described by Dr. Lomer, consists simply in performing the bimanual version, and bringing down a leg. After this the labor is allowed to pursue its own natural course, only helped by gentle traction, if there be too much delay. The points on which Lomer insists are, first, that the version should be at the *very earliest* moment possible, as soon as one or two fingers can be passed through the cervix. It is claimed that in this way the cotton tampon, an uncertain, dangerous (promoting sepsis) and painful appliance, is done away with, and a more certain and effectual tampon brought to bear.

The second point insisted on, is, that after turning, the uterus

should be left to expel the child with little or no outside aid, thus giving the os plenty of time to dilate, and avoiding laceration of the cervix, an accident particularly dangerous under these circumstances.

The matter of bimanual turning does not seem to be sufficiently understood and practiced among us, and yet Lusk declares it to be "one of the most important contributions to obstetric practice of the present century." The method of its performance is very simple. One hand is introduced wholly within the vagina and one or two fingers through the os. These fingers act on the lower segment of the fœtal ovoid, while the hand outside acts in an opposite direction on the other end. In this way, the child can be readily and easily turned, especially when the liquor amnii is still present and the uterus relaxed. One reason for failure, when this occurs, we apprehend to be an omission to anæsthetize the patient. This is of the utmost importance, as complete relaxation of the abdominal walls and of the uterus is thus secured and the operation greatly facilitated. It will be at once seen that this method is particularly applicable to the earlier stages of labor, and that the placenta being *prævia* is no insurmountable obstacle. Lomer advises that one edge should be sought and the amniotic sac entered on one side, or failing to find an edge, that the fingers should be passed directly through the placenta itself, a matter of no great difficulty.

Now as to results: They are simply astonishing. Of cases treated by this method alone, L. has been able to collect as follows: Hofmeir 37, with 1 death; Behm 40, no deaths; and his own, taken from Schröder's clinic, 101 with 7 deaths; total 178, with a mortality of 8 (4.5 per cent). It may be objected that these were hospital cases under the care of experts with a large experience in this particular operation. B.'s and H.'s cases are open to this objection, but L.'s cases were under the care of nine different operators, many of them beginners. If we take the cases treated by Lomer personally (16), and add them to those already reported, we have a a total of 95 with the almost incredible mortality of *one*. But take the worst results of all, the mortality (7 per cent.) in the cases collected by L. (101), and compare it with the mortality generally admitted in the text-books, from 25 to 40 per cent., and certainly there is a vast difference in favor of the new method, and one which should

make it the duty of every one intending to practice obstetrics to familiarize himself with this resource.

Now, as to the method, is it really difficult? Does it need an expert? Lomer assures us that it is not difficult, and the condition under which his results were obtained would seem to bear out his statement. With an experience of two cases, both successful, treated in this way, and a still larger experience of the bimanual version in other classes of cases, we can confidently confirm his statement. Even more, we can say that it is astonishingly easy, easier than the old method by internal version. In our last case, the time elapsing between the introduction of the hand into the vagina and the withdrawal of a foot, was certainly not more than two or three minutes, though it was a central implantation, and a head presentation. One finger only was passed through the placenta.

All the conditions, if the woman be chloroformed, for a favorable performance of the operation, are present; no retraction of the uterus, and most of the liquor amnii present.

But what of the child? Are its chances better or worse? At first sight, they might seem to be worse; but Lomer shows, by a large number of statistics, that they are not materially worse than under the old method. In his 101 cases, fifty per cent. were saved, a rather better showing than is made by the majority of the older operators. If the placenta is pierced, of course the child is lost; but if a leg can be brought down beside it, and the delay is not too great, its chances are quite as good, or even better, than by tampon internal version and rapid delivery.

Lomer's claim that the tampon is entirely done away with is hardly just, as there may be cases when the os will not admit the passage of even one finger and yet the hemorrhage be very severe. Such cases are rare, and if the tampon be used it is only for a short time. Nor is the new method necessary or applicable to all cases. When only one margin of the placenta is over the os, simply rupturing the membranes and bringing the head down to press upon the placenta will generally be a safe and efficient plan, one which we have successfully performed several times. In case the head does not come down fast enough, through inefficiency of the uterine

pains, we may then apply the forceps. We trust that our readers will refer to Lomer's article, many valuable points of which we have been forced to pass over, and then having carefully tested the method will give the profession the benefit of their experience. *M.*

* * *

We desire to call attention particularly to the report of the meeting of the Library Association, as well as to the purpose of this most admirable organization. It is by no means to the credit of a city of the size of Buffalo that it has such poor medical library facilities. The Young Men's Association furnishes a most valuable circulating library; in the Grosvenor Library many most excellent works of reference can be consulted; the Society of Natural Science furnishes an admirable scientific collection of books; but when one looks for something similar in the way of a medical library, he is disappointed. The nearest approach is the library of the Medical Department of the University of Buffalo, in which many works of value are to be found. The collection of the Medical Library Association is now kept along with that of the college, where also is to be found the small number of books owned by the county society. If one could reckon with these the valuable collections owned by a few practitioners and specialists of the city, we should not feel so much like complaining. While some of these may be added to the public store later, they are not yet to be taken into such account.

As it is now, however, there is at the service of the profession generally a very useful working collection which is constantly increasing. It is, therefore, most singular that any physician in the city should be so short-sighted or penurious as to begrudge the five dollars a year which every one ought to contribute to this most desirable object; still more so is it that any should withdraw this paltry support as some have done.

This Association library is now made virtually a circulating one; let every one step forward and give it his heartiest support.

* * *

As will be seen on another page, the Erie County Society has recently held its annual meeting. This was worthy of remark on

two accounts; first, because of the large attendance, and second, because of the scholarly address of Prof. J. B. Andrews, the retiring president, which we print in full in this number. He deals with a subject which has been a fruitful theme for newspaper and other discussion, and he gives a clearer exposition of the apparently rapid increase of insanity than we have ever before seen in print; it is not only lucid but convincing, and must command attention.

By no means the least important of the actions of the Society were the memorials and resolutions in honor of the dead. Since the last regular meeting Drs. Lapham, Allen and McBeth have joined the silent majority, and it was fitting that due note should be taken of the fact. Of these Dr. Lapham was, perhaps, the best and most widely known. To a very large circle of acquaintances and friends he had endeared himself as one possessed of the soul of honor, in whom there was no guile. Such men can be ill spared from any community. Concerning his last illness there were circumstances of such a peculiar nature that in some future number of The Medical Press we propose to report the case on account of its professional interest.

* * *

We ask the attention of our readers and subscribers to the fact that in this number they are presented with sixty-four pages replete with interesting reading-matter. Besides the original communications we desire to especially commend to them the letter of our New York correspondent, who has taken as his theme the most important matter of the therapeutics of phthisis and its relation to pertussis. His communication will well repay perusal.

* * *

In our December number we published a case of "Giant Growth of the Extremities." Some of our journals having seen fit to question the accuracy of the diagnosis, particularly so the editor of the *Cleveland Medical Gazette*, our esteemed contributor, Dr. Graefe, has taken pains to answer the latter, and has taken him to task in the same facetious language in which his accuracy had been impugned.

This case of giant growth, by the way, was beautifully and expensively illustrated, in a style which no other medical journal in this country seems willing to attempt. It is, therefore, no more than justice that if our contemporaries choose to copy the article they should give due credit to its source. In the *American Medical Digest* for December we find the whole article, with a poor copy of one of the illustrations, all credited, not to The Medical Press of Western New York, but to a journal of which we have never heard, if, indeed, it have any existence. We judge this to be a matter of in-*Digest*-ion for which pepsin or peptonoids would be prescribed in vain, and for which we have little sympathy and less excuse.

Correspondence.

SPECIAL LETTER FROM NEW YORK.

Recent Progress in Treatment of Phthisis, and Its Relation to Pertussis.

Editor Medical Press:

During the last few years great changes have crept into therapeutic procedure. It is the object of this letter to notice briefly some of these changes in their relation to pertussis. It is not many years since this familiar malady received but little attention from the average practitioner. It was lightly relegated to the class of unimportant ills incident to childhood, together with dentition, chicken-pox and parotitis—and left to the healing offices of nature or the domestic armamentarium. If the patient were robust, the affection, it was explained, would develop and strengthen his lungs. Only extreme cases and inflammatory complications were cause for professional interference. The duration of the cough was indefinite, and sometimes lasted from winter to winter. Gradually it wore itself away or was modified by some intercurrent inflammation. In this event, the treatment was that indicated by the acute invasion, and was generally at the hands of the family physician. Now we know that not only in its imme-

diate, but in its ultimate effects, pertussis is a serious disease, and as such commands serious attention from its incipiency. The reports and statistics of our large institutions have shown that its rate of mortality, though lower than formerly, is still high, not only from the familiar pulmonary and cerebral complications, but also from an evident relation which it bears to subsequent tuberculosis and catarrhal phthisis. The same is true, though to a less extent, in private practice. There can be little doubt that in many cases the germs of pulmonary disease are inseminated and fostered in the inflamed and irritated mucous membrane of a tedious pertussis. If dentition, hereditary dyscrasia or low vitality, from any cause, co-exist, by so much is the gravity of the condition enhanced. Its treatment, therefore, is not a matter of trifling importance. Vigilance is the price of safety. The treatment, of course, admits of a considerable range, and must vary with the character of the attack and condition of the patient. In the catarrhal stage, the treatment is the same as in other catarrhal inflammations. Usually, little is required beyond a warm room and clothing, if the season be cold, and the exhibition of mild stimulants and soothing expectorants. It is to the second stage that we give our chief attention. As this stage approaches, its neurotic element should be recognized and met by agents which modify nervous manifestations. They are legion, and the question is which not to employ. They must be effective, but must not be too depressing, nor impair nutrition. Perhaps the remedies most in favor are chloral, bromide of potassium, belladonna and quinine. Chloral and belladonna are potent remedies and are certainly effective in limiting the number and severity of paroxysms. But the former is not free from danger and the latter has often to be carried to its physiological limit in order to secure these results. When cerebral symptoms supervene, some bromide is impressed into the service and does excellent work. When considerable doses are required, belladonna and nux enter the combination. It is doubtful whether quinine has any other than a tonic effect, as it is not used in sedative doses, though it may somewhat diminish reflex irritability. The use of alum with or without belladonna still prevails to some extent among those who have made this a routine treatment, and they report some

modification of symptoms from its use. A decided advance was made by the introduction of the inhalations of carbolic acid and the fumes of cresoline, though the odor of the latter is some objection to its use. Carbolic inhalations few will object to, and their use has been attended with such notable success as to mark an era in the treatment of this disease. The formula of Dr. Clark is a good one :

℞ Acid Carbolic, ℥ss.
Potass. Chlorat.
Potass. Bromidi, āā ℥ii.
Glycerinae, ℥ii.
Aq., ℥vi.
Misce.

The application of cocaine, in three per cent. solution, to the larynx and fauces, has given prompt relief, and is particularly useful in those cases in which the irritation proceeds from the fauces. When serious danger is threatened from convulsions, it is used in many cases which, under former methods, were amenable only to chloroform. The objection to its use is the difficulty of applying it to young children, either by brush or spray; but this objection can be overcome, and is not greater than the objections to the use of chloroform. Counter-irritation is unsatisfactory, except when indicated by inflammatory invasions. In some cases the application of tinct. iodinii over the track of the vagus nerves has given slight relief.

I now wish to call attention to a remedy which is new in its application to this disease. The drug is quebracho. In treating a large number of cases, I have found no combination so effective as one of quebracho, belladonna and cannabis indica—and to the first of these drugs I attach no little importance. Its action is still imperfectly known, yet sufficiently to demonstrate that it is a safe remedy, and that its effects are no less satisfactory in this disease than in other conditions of dyspnœa. I am not aware that any unfavorable effects have attended its use. Whether it exerts its potency on the terminal nerve filaments, on the respiratory centers, or on the vaso-motor system, has not been clearly differentiated, but there are good reasons for saying that its influence is exerted upon both the respiratory and vaso-motor functions, whether or not the

distal nerves are directly effected. The success which attended its exhibition in chronic bronchitis, emphysema, spasmodic and cardiac asthma, led to its trial in pertussis; and others beside myself have used the drug empirically in this disease with results that were highly satisfactory; indeed, my experience with it has been so gratifying that I prefer it to anything else, and its employment has become, with me, a matter of routine treatment. The drug contains an alkaloid analogous to quinine, and also an astringent principle, which is no disadvantage in the many cases which are attended with intestinal relaxation. It is, perhaps, too much to expect that any remedy will materially shorten the course of pertussis; but practically this is accomplished, since it greatly reduces the severity and the duration of the second stage, and to that degree abbreviates the disease and lessens its dangers. Many severe cases have come under my notice, where rest and nutrition were sadly impaired, epistaxis and sub-conjunctival extravasation provoked, the face œdematous and cerebral symptoms threatened, by the frequency and severity of the paroxysms. By this treatment the paroxysms were reduced to five or six in twenty-four hours, and there shortly followed a corresponding improvement in the general condition. The formula used for a child of two years is as follows :

℞ Quebracho, fl. ext.
Tinct. Cannabis Ind., āā ℥vi.
Tinct. Belladon., gtt. xx.
Syr. Tolu, q. s. ad ℥ii.
Misce. Sig.: Dose, one teaspoonful t. i. d.

This dose may be increased, when indicated, or given at intervals of three or four hours. The complications and the third stage are treated on general principles and require no consideration in this letter.

R. P. Collin.

GIANT GROWTH VS. ELEPHANTIASIS.

A Letter from Dr. Graefe.

Editor Medical Press:

I have every reason for feeling highly flattered by the favorable notice my article on Giant Growth has received, especially as it has

been quite extensively copied; and I cannot help but think that this was due, in a great measure, to the handsome way in which you illustrated and printed it.

But, as you will see by the following comment, it was not understood by all; a fact which is very disagreeable to me, as it might leave the impression that in my endeavor to be concise and to elaborate my chain of reasoning properly, I either omitted elementary facts or stated them in a way not easily grasped by the superficial reader:

"A New Name for Elephantiasis Arabrum.—In a medical journal of a neighboring city we notice a cut of a young lady showing a well-developed case of elephantiasis arabrum, which is labeled 'A Giant Growth of the Extremities.' The writer says it is the only one published in this country. We would modestly suggest, this may be due to the fact that they are quite common. We might add that in Europe certain localities are said to be predisposed to these 'giant growths,' and we have an indistinct recollection of reading in school days of Patagonia, the country of 'big feet' Indians. If the lay press of St. Louis is to be believed, Chicago would be an excellent place for the writer of the article in question to pursue his investigations as to 'giant growths' of the lower extremities of young ladies."—*Cleveland Medical Gazette.*

Elephantiasis, called by the Arabs *dal-fil* (elephant's-foot), is a very common disease in Egypt, Arabia, Brazil, the Antilles, and generally in tropical latitudes, but isolated cases are seen in all countries. In elephantiasis we have a chronic inflammatory condition of the blood and lymph vessels, characterized by recurring erysipelatous attacks and œdema, leading to a hypertrophy of the skin, first, and gradually extending through all the structures of the part. It may involve various parts, and is called elephantiasis cruris, el. genitalium, etc., according to its seat.

To all who will read my article in your December number, a differential diagnosis will be easy; for my case is congenital, without inflammatory attacks, and the very fact of its being *congenital* proves a proper diagnosis on my part, and a basis for reasoning that it is due to cell changes in the embryo.

I think I deserve some little credit for placing this case where it belongs, for it had always been called Elephantiasis until I saw and published it—the first of Giant Growth or Congenital Hypertrophy in American literature.

Perhaps your handsome cut dazzled our Cleveland commenta-

tor, and he wrote as the boy who spelled from the illustrated primer: m-o-u-s-e, spells the boy; looking at the picture, he says, "rat:" g-n-a-t, again he spells, but pronounces it flea: at the end he spells z-e-b-r-a and triumphantly says "jack-ass." Being remonstrated with, he said "that he did not care, for his pa showed him the pictures and told him what they were!"

MORAL: Conclusions and diagnoses too hastily arrived at are apt to be false. And even an editor when he tries to be funny must remember that it is possible to show the congenital hypertrophy which the boy's zebra lacked, and to place his own pedal extremities on record by "putting his foot in it."

CHAS. GRAEFE, M. D.

Sandusky, Ohio.

Society Proceedings.

ERIE COUNTY MEDICAL SOCIETY.

Annual Meeting at Buffalo, January 12, 1886.

Reported by G. R. Trowbridge.

The meeting was called to order at 11 A. M. by the President, Dr. J. B. Andrews. The minutes of the semi-annual and special meetings were read and approved.

The Committee on Membership recommended for admission to the Society: Drs. J. W. Grosvenor, H. W. Bode, F. M. Rich, D. A. Morrison, DeLancy Rochester, J. M. Stanley, H. G. Whitnall, E. E. Johnston, D. C. Greene. The report was adopted and the newly elected members were introduced to the Society by the President.

Applications for membership were made by Drs. W. C. Callanan, T. M. Crowe, A. N. Hurd, Edwin Hathway, E. L. Gager, J. T. Pitkin, Norton, Elmer Starr, T. F. Dwyer, B. W. Cornwell, H. H. Bingham, E. T. Smith, M. N. Brooks, W. H. McFarlain.

These names were referred to the Committee on Membership. Vice-President Dorland then took the chair and Dr. Andrews delivered an address; subject, "The Increase of Insanity." (*Vid.* p. 151.)

A resolution of thanks to the President for his able address was unanimously carried.

An obituary notice and memorial to Dr. G. H. Lapham, of Aurora, was read by Dr. Dorland.

Dr. Ring moved that a copy of the memorial be forwarded to the State Medical Society to be entered on their records. Carried.

Dr. Gail read a memorial to Dr. Allen, of East Aurora, which was directed to be published and a copy sent to the family.

A memorial to Dr. McBeth, of Buffalo, was also read by Dr. Fowler.

Dr. Storck, as chairman of the Board of Censors, reported that certain individuals had been found to be practicing without legal license and were advised to discontinue. In regard to illegal female practitioners, the doctor said that a great deal of complaint had been made to the board. That one of these female doctors, a notorious "clairvoyant," had been brought before the grand jury, but had been discharged on account of lack of evidence against her. The doctor said that another attempt would be made to prosecute this person, and after mentioning her name he desired that the members of the society should supply him with whatever information they had concerning her, as the evidence of the previous trial could not be utilized a second time. In regard to one Hartley and his assistant Brown, Dr. Storck reported that Hartley claimed he did not "practice medicine," and that Brown had a valid diploma from a N. Y. homœopathic college. In closing, the doctor said that it was his opinion that every legal practitioner should become a member of the society.

Dr. Hopkins reported for the Committee on Legislation, giving a synopsis of the formation of the state and county societies, and in closing spoke of the proposed "State Board of Medical Examiners," and said that the committee recommended the matter to the careful consideration of the society.

Motion that the report and recommendations be adopted was so amended as to urge our senator and representative to use all justifiable means to secure the passage of the bill establishing the "State Board of Examiners," and, as amended, carried.

Dr. Clark reported that he had secured 500 membership certificates.

The library report was made by Dr. Samo, who, in closing, stated that the library was deficient in several volumes which it should possess, and advised the purchasing of such books. Dr. Mann said that there were a number of duplicate books in the Buffalo Medical Library Association library, and he thought these might be exchanged for those which were wanting. Drs. Mann and Samo were appointed to investigate, and empowered to purchase whatever books they thought were required.

Dr. Abbott read the treasurer's report, showing a balance in the treasury.

The committee appointed to revise the by-laws reported that they had carefully examined the present by-laws and were prepared to present a revision of the same. In order to facilitate matters, it was moved that these amendments be published in pamphlet form, and the secretary be directed to send a copy to each member of the society, in order that they might be discussed at the semi-annual meeting in June. Carried.

Miscellaneous Business.—Dr. Roswell Park offered a resolution commending the action of Mr. Foote, of Philadelphia, in his efforts in regard to the publication of laws relating to medical education in all civilized countries. Resolution adopted.

Dr. Bartlett reported that certain midwives, who had been refused licenses, still persisted in practicing. Referred to Board of Censors.

The society then elected the following officers : President, Dr. E. T. Dorland; Vice-President, Dr. O. C. Strong; Secretary, Dr. William H. Thornton; Treasurer, Dr. F. W. Abbott; Librarian, Dr. J. B. Samo. Board of Censors—Drs. Storck, Hopkins, Van Peyma, Briggs and Gail. Committee on Membership—Drs. Johnson, Howe and Putnam. Delegates to State Society (to serve for four years)—Drs. Bartow, F. W. Hinkel, F. S. Crego, L. S. Boies.

After election, there being no further business, the society adjourned.

BUFFALO MEDICAL LIBRARY ASSOCIATION.

Third Annual Meeting, December 19, 1885.

The third annual meeting of this Association was held Saturday evening, December 19, at the room of the White Library, in the Buffalo Medical College building.

Dr. John Hauenstein, vice-president, in the chair.

Dr. Frederick, treasurer, reported receipts $275, expenses $230, balance $45, with easily counted dues amounting to $45 more. In coming to the present room, which answers every purpose, a saving of about $200 a year is made to the association. The expense of an attendant upon the library is but $52 a year, the college giving the rent to the association. With the surplus left and the assured income for the coming year, the Association will have sufficient for all needed expenses.

Dr. Mann, librarian, reported 250 bound volumes, full files of about twenty-five periodicals for past four years, and many complete, or partly complete, files of many journals, numbering in all many thousands, and of great value. Many journals will be soon bound, and all are rapidly being so arranged as to be convenient for reference.

The plan of circulating the periodicals works well. Many members, especially the younger ones, avail themselves of the opportunity offered for home reading. About twenty-five periodicals are taken, and more will be added during the year to come. They include all the leading American and English and representative ones from Germany and France. They are carefully chosen by a committee to meet the wants of the general profession. The attendant is present daily from half-past twelve to six o'clock P. M. She is always ready to assist all members who call at the rooms in their use of the library. The rooms are nicely furnished, warmed and lighted, and are really a very pleasant place for reading or study.

Dr. Hauenstein desired to call the attention of the younger members of the profession to the value of the library to them. The large number of periodicals on the tables, the advantages offered in their

easy circulation, gave to members, for five dollars a year, command of the best periodical literature of this country and Europe.

The following officers were elected for the coming year :—Dr. John Hauenstein, President; Dr. Leon H. Harvey, Vice-President ; Dr. James W. Putnan, Secretary ; Dr. C. C. Friedrick, Treasurer ; Dr. M. D. Mann, Librarian; Dr. Wm. D. Granger and Dr. Chas. G. Stockton, Trustees for two years,—Dr. Lucien Howe and Dr. H. H. Hopkins holding over for another year.

Dr. G. W. Burwell, first President, declined a re-election.

The Association desire to publicly acknowledge the following subscriptions made during the year to free it from debt :

Dr. G. W. Burwell	$ 25
Dr. M. D. Mann	25
Dr. John Hauenstein	25
Dr. Wm. D. Granger	15
Dr. Thomas Lathrop	10
Dr. Conrad Diehl	10
Dr. Thomas F. Rochester	10
Dr. H. R. Hopkins	10
Dr. Roswell Park	10
Dr. Charles Cary	10
Dr. Lucien Howe	10
Dr. M. B. Folwell	10
Dr. F. W. Bartlett	5
Total	$175

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of December 1, 1885.

Reported by Charles G. Steele.

Dr. W. W. Potter in the chair.

Dr. W. D. Granger read a paper on "Cerebral Anæmia and Hyperæmia." He spoke of the different ways in which the quality of the blood may be deteriorated. He divided the varieties of anæmia into two, acute and chronic. The doctor considered it very hard to diagnose cerebral anæmia and hyperæmia, as the afternoon

symptoms might be just the opposite of those of the morning. By analogy, there should be vaso-motor nerves in the brain, but this fact is not easily demonstrated. Hemicrania is probably due to vaso-motor disturbances, but the treatment of this disorder is empirical. He gave the supposed symptoms of cerebral anæmia, and held that the disease rarely existed alone, but was more often a condition and not a disease. In the text-books of to-day, and in the works of the authorities on nervous troubles, the symptoms of cerebral anæmia and hyperæmia are as varied and as many as there are diseases. The doctor advised that careful examinations should be made in these cases, and that the previous history must be carefully ascertained.

Under the head of discussion Dr. J. W. Putnam wanted to know whether, in continued fevers, in typhoid, in the diseases of infancy and the fever following trauma, there was hyperæmia or not.

Dr. Lucien Howe spoke of the examinations made of the retina, by the ophthalmoscope, as being indications of the vascular condition of the brain. He held that in the hands of inexperienced men more harm than good is done with the ophthalmoscope. Dr. Howe claimed that the vascular supply of the retina is independent of that of the brain, and that it alone was seen with the aid of the ophthalmoscope.

Dr. Starr said that Dr. Howe was correct; that the circulation of the retina and brain were not so closely identified as has been supposed. The artery which supplies the retina, is a branch of the ophthalmic, which in turn is a branch of the common carotid. The doctor said that there might be a difficulty of the eye, which would render the retina very anæmic, while the brain showed no symptoms of anæmia whatever.

Dr. Crego said that the latest investigations showed that there are vaso-motor nerves in the brain.

In closing the discussion Dr. Granger told Dr. Putnam that no one could yet give the answer to his question.

Under the head of voluntary communications, Dr. Howe showed a rabbit on whose eye the operation of transplantation of the conjunctiva had been performed. It demonstrated the readiness with which the conjunctiva will become attached and grow when trans-

planted. Dr. Howe stated that he had performed the same operation on a human being a few weeks before, and that it had been entirely successful. The line of demarcation between the old and new conjunctivæ could be readily seen.

The diseases most prevalent during the month of November were diphtheria, croup, pneumonia and typhoid fever.

Meeting of January 5, 1886.

The president, Dr. Charles G. Stockton, occupied the chair. There had been no paper prepared for the evening, and voluntary communications were called for.

Dr. Lucien Howe showed a sketch of a sarcoma of the lower eyelid. He removed it and gave a good prognosis, but in two months it returned. He removed it again, going in well behind the globe of the eye, and dissected out all suspicious tissue. This was three years ago, and the growth has not returned. A second specimen was shown by the doctor, consisting of a tumor of the lower eyelid, which contained a considerable deposit of calcareous material. He then showed three casts, illustrating cases of glioma, and, also, specimens in alcohol of three cases. The glioma originates in the globe of the eye, and pushing into the cornea, becomes an ulcerating mass. Dr. Howe said that enucleation in the early stages gives a very good result. Where there is a suspicion of glioma, Dr. Howe advised the general practitioner to examine with the ophthalmoscope or send the case to one capable of diagnosing it.

Dr. B. H. Grove related a case of glioma which was of very rapid ingrowth, and, as no operation was performed, death soon ensued. Dr. Grove showed a number of nasal polypi and hypertrophied growths, which he had removed from the nose of a man who had apparently suffered from catarrh for fifteen years. He also cited the case of a boy, aged seven years, who has been suffering from otorrhœa. The doctor made a careful examination, and found a small piece of necrosed bone in the floor of the external auditory canal. He removed it, and since that time the boy has not suffered.

Dr. F. W. Bartlett related the case of a man, who, while tossing up and catching in his mouth a ten cent silver piece, swallowed it. This was in October, 1868. In October, 1884, he coughed it up.

Dr. Bartlett showed the piece, which was worn down to the size of a silver three cent piece, and was very much blackened. He thought it must have lodged in one of the bronchi. In the sixteen years in which the piece was in the lungs, breathing was not much interfered with. Dr. Bartlett repeated a case which had been given to the society a number of years ago. A man swallowed, while eating soup, a conical shaped piece of bone, three-fourths of an inch broad at its base, and about an inch long. The left lung began to trouble the man at once, and at the end of a week he had an alarming hemorrhage. These hemorrhages continued for four years, and in that time the doctor estimated that there were 1000 of them. He became very much debilitated, and it was thought he was dying of phthisis. One day, during a severe fit of coughing, the bone came up. He at once began to mend, and is at present a well and hearty man.

Dr. Hartwig wittily told a story of a false alarm. He was called to see a boy who said he had swallowed a three-cornered silver badge. When the doctor saw him he was feverish but could swallow pretty well. The inflammatory symptoms were treated and the case became one of croupous pneumonia. On the fifth day of the boy's illness the badge was passed by the anus. It was a strange coincidence that the lad had swallowed the badge the same day he was attacked with the croupous pneumonia.

Dr. W. W. Potter said that a case was to be reported at the next meeting of the New York State Medical Association of a person who had swallowed a plate with four false teeth attached to it. It was passed per rectum.

Dr. Hartwig was once sent for to see a child which had swallowed a pin. He found it lying across the larynx. Not having the proper instrument with which to remove it he sent to a brother physician's for one. The other doctor brought the tool himself, and while Dr. Hartwig was otherwise engaged he put his finger into the child's mouth and pushed the pin down the œsophagus. The pin, which was the second the child had swallowed that year, was passed by the anus. Dr. Hartwig also told of a lady who swallowed a pin with a large black head. He told her to eat sauerkraut, pork and beans and other indigestibles, in order that the pin might be in-

veloped in a protective while passing through the intestines. The doctor knew of a child one and a half years of age who swallowed a button and passed it the same evening.

Dr. Howe said he remembered a case once told to the society of a woman who was passing fœtal bones from her bladder. The physicans who had the case thought it was one of extra-uterine pregnancy in which the bones had worked their way out through the bladder. Dr. C. C. F. Gay examined the bones very attentively for a while and then dryly said they were more like chicken bones than anything else he knew of. At the next meeting of the society the case was reported to be one of hysteria, the woman in the meantime having passed several links of sausage and a quantity of pickles from her bladder (?).

Dr. Grove knew of a person who had swallowed a plate with three teeth attached.

Dr. Grosvenor always used sweet oil in large doses in treating cases in which foreign bodies had been swallowed.

Dr. W. G. Ring said that a reliable friend had told him of a boy, aged eight years, who had swallowed a pen-knife with the blade open. Ground buckwheat was given, and the knife was passed from the bowels in forty-eight hours.

Dr. Potter related the case of a man in Stuttgart, in 1880, who in some manner introduced a tool into his anus. It worked its way above the sigmoid flexure of the colon, and at the post-mortem examination was taken out from the large intestine.

Dr. Howe gave the case of a man who had a bad cicatrix on one side of his face. It disfigured him very much and he wanted it removed. The scar was caused by the explosion of a gun, a part of the stock having hit the man in the face. An examination was made and the probe struck a hard substance, which seemed to be iron. After a consultation the body was removed and was found to be the breech-pin of a gun. It was taken out with great difficulty, and the man died from acute meningitis. Dr. Howe vouched for the truth of the story by saying that he has seen the man's skull and the breech-pin.

Dr. Dorland once had a patient who swallowed a good-sized screw. He gave mush and milk and in forty-eight hours the screw

was passed per anus. The doctor thought this the safest process of getting foreign bodies out of the intestinal tract.

Dr. Bartlett was once called to see a child suffering from severe pains in the abdomen. He gave anodynes and applied poultices to the abdomen. The neighbors wisely said the child had worms, but Dr. Cronyn, who was called in consultation, thought there was a foreign body in the intestines. The child died, and upon post-mortem examination a pin was found in the appendix vermiformis. He also told of a six months old girl who swallowed a penny. It lodged in the œsophagus and the parents would not consent to its being pushed down. The coin was in the œsophagus for four months. The child was fed through the mouth and would drink until the œsophagus was full. Then the fluid would slowly pass by the obstruction and the child would cry for more. During a fit of vomiting the penny came up one day. It was one-half its former thickness and both reliefs were gone. The doctor said that Dr. Storck once had a case where a young woman swallowed pins and needles, and that fifty of them passed from the rectum.

The prevailing diseases reported were diphtheria and cerebral spinal meningitis.

The Association then adjourned.

Book Reviews.

CLINICAL NOTES ON UTERINE SURGERY. By J. Marion Sims, M. D. Memorial Edition. Pp. 401. New York: Wm. Wood & Co. 1886.

This is not a posthumous work by the well-known writer who has shed such a luster upon American gynæcology, but a memorial edition of a collection of papers which first appeared in 1866. These dealt largely with the menstrual function and the management of sterility. In fact, the whole volume practically treats of the phenomena of conception and its artificial production. In connection with this latter topic it is of interest to note that the distinguished author stated that he had given up the practice and did not expect to return to it again.

Practitioners who are harrassed by the disappointed patients who long for the progeny they have not, should by all means care-

fully study this volume. Much of the energy of the author's character he has infused into his writing, and his opinions always were and always will be deserving of most careful attention. In our estimation the publishers have done well to reproduce the writings of this master.

WOOD'S LIBRARY FOR 1885.

CLIMATOLOGY AND MINERAL WATERS OF THE UNITED STATES. By A. N. Bell, M. D.

DISEASES OF THE LUNGS. By Prof. Germain Sée.

DIAGNOSIS OF DISEASES OF THE BRAIN AND SPINAL CORD. By W. R. Gowers, F. R. C. P.

New York: Wm. Wood & Co. 1885.

The first of these volumes is by the well-known author of the *Sanitarian*, and was written especially for this series. It is a systematic and most successful effort to present in convenient shape the accumulated knowledge concerning the climatology of our country, obtained piecemeal by hosts of observers. It discusses the composition of the atmosphere, its permanent and variable constituents, its electrical conditions, the relations of land and water to climate, such features as heat, winds, altitude, atmospheric pressure, ocean air, forests, the weather, the seasons, and numerous other topics of interest. The climatological topography and mineral springs of the United States are taken up in sectional detail, and carefully prepared maps make clear the text. Finally, a chapter on practical conclusions closes the volume, which we esteem one of the most valuable of the entire series. It puts in attractive form that which is so often regarded as "dry" reading, while the physician who has no personal knowledge of the various health resorts may nevertheless learn by its aid the best place to which to send his patient.

The volume on *Diseases of the Lungs*, by Prof. Sée, treats only of the non-tubercular forms. It includes a consideration of acute bronchial inflammations, acute pneumonia, general therapeutics of broncho-pulmonary inflammations, pulmonary gangrene, syphilis, cancer, and hydatids of the lungs. It stands to reason that every utterance on these subjects, by the distinguished clinician of the Hotel Dieu, is worthy of careful study. The main portion of the work is enhanced in value by the appendices, one by

Dr. Sternberg, on the micrococcus of pneumonia, the other by Prof. Dujardin Beaumetz, on Bacteria, with special reference to their pathogenic workings in the lungs. At the present day we are not allowed to lack for literature on the subject of micro-organisms, nevertheless there is no gainsaying the eminent propriety of just such a chapter.

For Dr. Gowers' work on *Diagnosis of Diseases of the Brain and Spinal Cord* we have nothing but a hearty welcome. By its means diagnosis of nervous maladies is made, if not comparatively easy, at least a much less difficult task than it would be without some such aid. The chapters on what he felicitously calls the "medical anatomy" of the brain and cord are most valuable additions; in fact, they are absolutely essential; and the illustrative cases, which are introduced in appropriate places, are most happily inserted.

Altogether, *Wood's Library for 1885* has been most judiciously selected, and may form a valuable addition to the largest private library.

THE FIELD AND LIMITATION OF THE OPERATIVE SURGERY OF THE BRAIN. By John B. Roberts, M. D. Pp. 80. Philadelphia: Blakiston, Son & Co. 1885.

This monograph was at once the longest and most notable of the various papers read before the American Surgical Association at its last meeting, and is one of very great intrinsic merit. As indicating some of the ground taken by the author, we quote the following maxims taken from its opening pages: "Drainage is more essential in wounds of the brain than in wounds of other structures." "Many regions of the cerebral hemispheres of man may be incised and excised with comparative impunity." "Perforation of the cranium is to be adopted as an exploratory measure almost as often as it is demanded for therapeutic reasons." Statements like these admit of no evasion, but are made boldly and backed up with argument and evidence of the most indisputable character. An assertion like this, "The results of the study of cerebral localization are more necessary to the conscientious surgeon than to the neurologist," might startle the practitioner of the past generation, but admits of no dispute among those who have the surgical courage of their convictions and an acquaintance with recent literature.

Further reference to this brochure will be found on an editorial page; in this place we can only take space enough to express our pleasure at seeing it made accessible to the entire profession by publication in book form.

A Manual of Operative Surgery. By Lewis A. Stimson, M. D. Pp. 506. Philadelphia: Lea Bros. & Co. 1885.

The first edition of Dr. Stimson's manual received universal recommendation and made its way everywhere upon its merits. Descriptions of standard operations are not subject to change, but since the previous edition appeared, numerous modifications have been made in antiseptic methods and dressings, and some operative procedures which were then *sub judice* are now recognized as standard; hence the advances made called for a new edition which is now in nearly all respects quite abreast with the times. It would probably be hardly fair to expect in a manual of this nature directions for such rare operations as laryngectomy, gastrectomy, cholecystectomy, Alexander's operation, etc.,—but we regret the absence of a fair description of that most certain method of radically treating hernia, ligation and excision of the sac and suture of the ring, an operation even now practiced in this country, we think, much oftener than Wood's.

Nevertheless, these defects of omission do not mar the value of the contents of the book as it stands, and may be easily added in the subsequent editions which are sure to be called for. The two hundred and forty-six illustrations serve to give that lucidity and vivacity to the text which nothing else can supply, while to the general appearance of the book no exception can be taken; it is alike creditable to author and publishers.

Essentials of Vaccination. By W. A. Hardway, M. D. Pp. 146. St. Louis: J. H. Chambers & Co. 1886.

This little volume, by a well-known St. Louis dermatologist, contains, in most readable form, an excellent summary of our present knowledge of the effects of inoculation for the prevention of that dread scourge, small-pox. It opens with a brief historical sketch, showing how it had its apparent origin in the East; it next con-

siders variola in animals, and makes clear the several different and usually confused features of horse-pox, sheep-pox, etc. The normal course of vaccinia in the human subject is then discussed, and its abnormal modifications naturally follow in a chapter by themselves. Vaccinal syphilis and vaccinal eruptions receive fair consideration. After a chapter devoted to re-vaccination follows a very impartial presentation of the merits of different kinds of virus, the author naturally leaning to the bovine. Various methods of obtaining and storing virus are given with explicitness; its proper insertion carefully described, and the book is closed by a chapter devoted to examining the various objections which so many are fond of raising, chiefly from political or other selfish motives, and with which the author has very little patience, although giving them a respectful hearing.

The book will prove of interest and of value to all who read it, and this we advise all interested in the subject to do.

A PLAN FOR THE EXAMINATION OF THE EYE. By Lucien Howe, M. D. (Author's Compliments.) 1885.

This plan, designed "to assist the student in observing cases and the practitioner in recording them," is at once the best guide to the systematic examination of the eye and the best reference case book with which we are familiar. A suitable place is found for the record of every variation from the normal standard, and by its aid a most exact knowledge of a given case can be obtained years after its record is made. Such a comprehensive plan must be invaluable to every oculist.

WOOD'S POCKET MANUALS.

VENEREAL MEMORANDA. By P. A. Morrow, M. D.
CUTANEOUS MEMORANDA. By H. G. Piffard, M. D.
New York: Wm. Wood & Co. 1885.

These little manuals are very concise epitomes of the essential features of the branches of which they purport to treat, and nothing better can be placed in the hands of those who are cramming for examinations, or who desire *multum in parvo* for instant reference. The names of their authors are sufficient guarantee of their reliability, while the fact that the latter has reached its third edition shows the appreciation with which it has been received.

PRACTICAL NOTES ON THE TREATMENT OF SKIN DISEASES. DISEASES OF THE PRESPIRATORY AND SEBACEOUS GLANDS. By George H. Rohé, M. D. Baltimore. (Author's Compliments.)

This little brochure contains a series of brief, concise and exact notes on the treatment of such skin affections as hyperidrosis, bromidrosis, seborrhœa, acne, sycosis and the like, from the pen of one of the prominent dermatologists of the south. Its classification, so far as it goes, is based on the anatomy of the skin, probably the only rational one to follow, and it is terminated by those formulae for which the "busy practitioner" is always supposed to be seeking. For such it is well adapted, and is worthy of their studious attention.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

For Sale.—A Beck's popular Binocular Microscope, with or without lenses, as desired. Address "Microscope," care of THE MEDICAL PRESS.

For Sale.—A Physician's residence and practice in one of the best towns in Ohio population 2000; good roads and fine country. Present owner intends to retire. Address: E. Y. KING, M. D., Richwood, Union Co., Ohio.

BOOKS RECEIVED.

From J. H. Chambers & Co., St. Louis:

Essentials of Vaccination: W. A. HARDAWAY.

From P. Blackiston, Son & Co., Philadelphia:

Operative Surgery of the Brain: J. B. ROBERTS.
(Through Peter Paul & Bro.)

From Lea Bros. & Co., Philadelphia:

Fractures and Dislocations: T. PICKERING PICK.

From Authors, etc.:

A Plan for the Examination of the Eye: LUCIEN HOWE.

Practical Notes on Skin Diseases, No. 1: G. H. ROHÉ.

TREATMENT OF LACERATED MIDDLE MENINGEAL ARTERY.

Before the Clinical Society of London (October 9), Mr. Charters Symonds read a case of trephining for compression by a clot derived from the middle meningeal artery, and suggested the resort to compression or closure of the carotid as a means of arresting the hemorrhage. A man, aged forty-three, fell from a height of six feet, striking his head. He was admitted immediately into Guy's Hospital, and was shortly after in a totally insensible condition, with hemiplegia and a pulse of 52. He had two abrasions on the left temporal region, and a large extravasation of blood. Though there had been no conscious interval, Mr. Symonds immediately trephined on account of the hemiplegia and deepening coma. The site selected was rather posterior to that usually chosen, as here the chief injury seemed to have been received. On elevating the disc of bone a pulsating clot was exposed and removed. The bleeding was profuse, and to reach the laceration a great deal of bone was removed by Hoffman's forceps, two loose pieces of the sphenoid being found. Two lacerations were found in the vessel; one was closed by over-running the vessel with fine gut; the other by completing the division of the vessel and twisting both ends. The bleeding, however, still continuing, and the bone having been incised to the base, the hemorrhage was finally arrested by under-running the artery with a piece of the dura mater, and making traction on the ligature carried out of the wound, and by a pair of torsion forceps pushed down into the farthest accessible point and given a half twist.

The operation altogether lasted two hours, and the man lost much blood. Recovery was immediate. As soon as the clot was removed, the pulse rose from 40 to 64, and the muscles of the right foot moved; and at the conclusion of the operation the man could move his right arm and leg, and give his name and address. The next day he answered all the questions and spoke rationally. The same afternoon he became restless, finally delirious, coma supervened, the temperature rose gradually, reaching 104.8° shortly before death, which took place at 3.15 P. M., or fifty hours after the accident. At the autopsy the dura mater over the exposed area was yellow and purulent, and there was general congestion. The temporo-sphenoidal lobe on the right side was bruised, as was the cerebellum. The fracture extended from the site of the operation to the wing of the sphenoid, and there divided into two branches, the one running over the orbital plate to reach the cribriform plate of the ethmoid, the other reaching the same point after traversing the optic foramen and sphenoidal fissure.

In his remarks, Mr. Symonds said that his main object was to call attention to the want of information upon the best method of dealing with the bleeding vessel, and to suggest a resort to compression of the carotid from the moment such a case is seen, and to its ligature, should, after trephining, other means fail to arrest the bleeding. Though no mention is made in our leading works of this method of arresting the hemorrhage, no doubt the idea had occurred to others before it had to him in connection with this case two years ago. To the severity of the operation, to its great prolongation, and to the loss of blood, he attributed the fatal meningitis, and did not think that the result affected the average success of trephining. As to whether it would be better to secure the external or common carotid, he thought that while deligation of the external would remove the special cerebral dangers attending the closure of the common, its safety was to be established. He considered that with our present method of treating wounds, he would prefer to close the external carotid. Mr. Furneaux Jordan's suggestion to ligature the carotid instead of trephining, while it was thought effective, would, Mr. Symonds considered, be confined to those cases seen very early, and would therefore, have but a limited application. The absence of the interval of consciousness was considered to be due to concussion, while the strictly localized character of the paralysis was unlike that seen in cases of cerebral laceration.—*Med. and Surg. Reporter.*

The Medical Press
of Western New York.

Vol. I. MARCH, 1886. No. 5.

PRESIDENT GARFIELD'S CASE.

A Communication from Prof. Frank H. Hamilton.

EDITOR OF THE MEDICAL PRESS:

My Dear Doctor—In the January number of your journal, prefatory to the report of Albers' case, you say: "It is not so long since the occurrence of a case, where the possibility of recovery after a gunshot wound of the lumbar vertebræ was discussed as a matter of international interest, that the subject has been forgotten. A renowned foreign surgeon, Esmarch, was by many taken seriously to task for uttering the belief that in this particular case the wound was not of necessity fatal, although he showed that similar wounds in many of the lower animals were recovered from. Recently a case has been reported by Albers (*Deutsch. Militärzlch. Zeitschft*), which must forever settle this question. It is, in other words, the first case of the kind recorded in surgical literature."

In reference to this editorial, permit me to say, that it contains some errors as to matters of fact which it seems proper—mainly in the interest of science—to correct.

It is not correct to say that the subject of international interest which was discussed was "The possibility of recovery after a gunshot wound of the lumbar vertebræ." Recoveries after gunshot injuries of the processes of these vertebræ have been too frequent to admit of denial, and I may be permitted to assume that you

meant to refer only to gunshot wounds of the *bodies* of these vertebræ. But with this qualification, the "international" discussion is not correctly stated. The possibility of recovery after a penetrating, but not perforating, gunshot wound of the body of a lumbar vertebra has been established. The actual international questions were—

First—Has any human being ever recovered after a perforating gunshot wound of the body of a lumbar vertebra?

Second—Could Mr. Garfield have been possibly saved?

You have yourself answered the first of these questions correctly and fully when you say, this case of Albers is "the first case of the kind recorded in surgical literature," if by this you mean recorded and established, and if the case of Albers can be considered established—that is, confirmed beyond all possible doubt. I have myself reported (*Med. Record, 1867, II., 401*) the case of a soldier wounded March 16, 1865, the ball "perforating, or possibly grooving the anterior surface of the body of the second lumbar vertebra." Six months later a small fragment of bone escaped. Subsequently I found the ball under the skin, upon the opposite side of the body, and removed it. His recovery was complete. At first, and for some months after the receipt of the injury, he was paralyzed in his lower extremities; and when, after the removal of the ball, I brought him before the New York Pathological Society, there remained a slight paralysis of the bladder, and there existed a marked projection of the spinous process of the second lumbar vertebra, apparently occasioned by a change in the form of the body of the corresponding vertebra.

It was the opinion of all the members of the Society present that the vertebra had been struck by the ball and probably perforated. Notwithstanding the strength of the evidence in this direction, and which you cannot fail to see was quite as strong as the evidence in the case reported by Albers, a doubt has been thrown upon the accuracy of the diagnosis by the subsequent pension office examinations; and as he died and was buried without an autopsy, the diagnosis remains unconfirmed.

There are, I believe, no other cases upon record except these two—my own, and that reported by Albers—in which recovery from

such an injury has been *claimed* by the reporter; neither of which cases were known to Esmarch; and notwithstanding the fact that, after a diligent and prolonged search in the surgical museums in the world, no such specimen has been found whose history corroborates his statement, Esmarch says, "In military surgery there are examples enough of recovery from similar injuries." He makes, however, no specific reference to examples, or to authorities, to prove the correctness of his assertion; unless we are to consider as authority his statement that "every hunter knows that the stag mostly survives a peculiar shot, the so-called *hohlschuss*." "The ball, in this case," he adds, "must go directly through a vertebral body itself." "The hohlschuss is considered to be a bad one by the hunters, because by it they do not secure the game." The animals thus wounded get up and run away. If so, how do the hunters know that the stag has been shot through a lumbar vertebra? or that he has been shot through any vertebra? or, indeed, that his spine has been hit at all? or that he recovered? and if this gossip of the deer-hunters were true, does it prove that what happened to a stag, whose vertebræ are many times larger than human vertebræ, must of necessity happen when a human being is wounded? No man, who claims respect for his own opinions, should utter such nonsense, and call it scientific and conclusive testimony.

The second question, "Could Mr. Garfield have been possibly saved?" was rendered "international" only by the fact that Esmarch, of Kiel, said to his students that he might have been, if his surgeons had properly performed their duties. No other surgeon on the other side of the Atlantic, so far as I have been able to learn, dissented from the practice of the surgeons in attendance, or publicly declared that recovery was possible. On the contrary, with a most remarkable unanimity, with the exception of the voice from Kiel, surgeons and medical journals declared, after the disclosures of the autopsy, that the case was, from the beginning, utterly hopeless. And with the same unanimity they gave their unqualified approval of the treatment.

Observe that the second question is not, simply, "Is a perforating gunshot wound of the lumbar vertebræ necessarily fatal?" but was it necessarily fatal, as you have properly stated it, "*in this*

particular case?" the injury to the spine being associated with a fracture of two ribs, the scattering of the minute fragments of the broken vertebra into the adjacent tissues, where they were beyond the reach of the surgeon, and a lesion of the splenic artery, from which resulted the formation of an aneurism, and the rupture of which was the immediate cause of death.

This was the "particular case" in question, and of which Mr. Esmarch said, first, that if the surgeons first called had not sought for the ball with uncarbolized fingers and instruments; second, if the surgeons called on the second day—Drs. Agnew and Hamilton—had not probed with uncarbolized instruments; third, if the subsequent management had been conducted antiseptically, and fourth, if proper drainage had been secured, with a few minor considerations, the patient might have been saved.

Dr. Wm. Hunt, of Philadelphia, to whose "Annual Address before the Philadelphia Academy of Surgery" in 1883, I am wholly indebted for what was said by Mr. Esmarch, and for several well pointed criticisms upon his comments, has very aptly said of the first accusation: "Railroad stations, as a general thing, do not keep twenty to forty per cent. solutions of carbolic acid on tap." As to the second charge or indictment, Mr. Esmarch was incorrectly informed by an unofficial and unauthorized report made by Dr. Bliss to the *Medical Record*, and which error of statement he subsequently corrected. The facts are, that a probe was put into my hand, but seeing that the orifice of the wound was hermetically closed by a dry clot of blood, I declined to introduce it, partly because there was danger of renewing the hemorrhage, which had already been alarming, and partly because I was satisfied that a sufficient search had already been made by those who were first called. I handed the probe to Dr. Agnew, and he also refused to introduce it. Thereafter no person introduced a probe into the wound until suppuration had commenced, and never for the purpose of searching for the ball, since it was well understood to be beyond reach. Third, carbolic acid was employed vigorously, according to the teachings of Mr. Lister, in spray and in solution, from the earliest moment that it could be obtained and applied, and until a late day of the treatment, when, under the suspicion that it was exerting a

septic influence, the potassic permanganate was substituted as a means of injecting and disinfecting the sinus; and finally, drainage was secured by posture, drainage tubes and a counter-opening, as far as it was found practicable to do so. In short, as far as possible, everything was done which Mr. Esmarch thought ought to have been done, and everything was omitted which he thought ought not to have been done.

Really, the only international question, or, in other words, the only question between Mr. Esmarch and his cis-Atlantic neighbors, was between him and those few American "physicians" (Esmarch) who, contrary to the opinion of Mr. Garfield's surgeons, thought that the ball could have been, and ought to have been, cut out. To this small number of American "physicians" (Esmarch), he administers the following parental reproof: "It appears, therefore, that our colleagues on the other side of the ocean have not regarded *our* admonition as to the leading principle in the first treatment of gunshot wounds: 'Do no harm.'" "Practicing American '*physicians*' seem, under the pressure of public opinion, to have assented to the proposition that much too little was done; but, according to my view, they did not do too little, but much too much." "The public, indeed, think that the ball is the most dangerous thing, and the soldier is happy when the ball which has been cut out of him has been placed in his hands. The *surgeon*, however, knows that the ball itself, in most cases, does no harm. The real injury is what it has inflicted in its course, and what is superadded comes mostly from the fingers of the examiner."

American *surgeons* have not, during the last twenty-five or thirty years, been without experience in gun-shot wounds, and scarcely need to be advised by their trans-Atlantic brethren on the matter of their treatment. To them there is nothing new in Mr. Esmarch's teachings; and nothing which, in common with Mr. Garfield's surgeons, they have not practiced.

Finally, dear doctor, in view of the fact that Mr. Esmarch has thought it proper for him to publicly criticise, in all of its details, the treatment of a case which he had never seen, and of the correctness of which treatment, he, as a surgeon, knows he could not so well judge by any written description, as he could have judged

if he himself had been in daily and almost hourly attendance;—in view of the fact that those who had been invited to assume this responsible duty were, to say the least, his peers in experience, if not in reputed ability (and this I am permitted to say without including myself);—in view of the fact that there is a total lack of evidence of the correctness of his statement and positive assertions as to what has happened in other "similar" cases, and a total lack of logical sequence in the application of these imaginary cases to the case of Mr. Garfield—and in view of the fact that he evidently did not know or has misrepresented the nature and gravity of the wound, and that, equally, he did not know or has misrepresented what was done by his surgeons, and what was not done;—in view of all these facts, it cannot be considered out of place for me to say, that he well deserved to be "taken seriously to task, for uttering the belief that in this particular case the wound was not of necessity fatal, although he showed that similar wounds in many of the lower animals were recovered from"; nor can it be a matter of surprise that surgeons and medical journals, both at home and abroad, in many cases regarded his comments as worthy of ridicule, rather than of serious discussion.

And now that the teachings of Prof. Esmarch, namely, that "the ball itself, in most cases, does no harm," and that "the real injury is what it has inflicted in its course," have been shown to be in accord with the opinions and practices of the surgeons who, after the final organization of the counsel, had charge of the President to the time of his death, it remains for those "practising physicians who, under the pressure of public opinion" (Esmarch), and after the autopsy had demonstrated that the ball was encapsulated and in a position where it could do no harm, publicly declared, through the newspapers and literary magazines, that it ought to have been sought for diligently; and that if it could not have been done otherwise, the cavity of the belly should have been laid open and the ball removed,—it remains, I say, for these gentlemen to reconcile their very wide differences of opinion with Prof. Esmarch.

Yours truly,

FRANK H. HAMILTON.

New York, February, 1886.

PNEUMONIA DURING PREGNANCY.

By Wilfred H. Sage, M. D.

[Read before the Olean Medical and Surgical Club, Jan. 6, 1886.]

In preparing this paper, which I have the honor of presenting to you this evening, I have no theories to suggest in explanation of any phenomena observed in the course of pneumonia occurring in the female during pregnancy. My object has been to determine as far as possible, from the statistics of medical writers, supplemented by the opinions of physicians founded upon their experience in practice, the frequency and mortality of this disease when associated with the pregnant state, as well as the cause of the reciprocal effects between pneumonia and pregnancy.

While I have desired to make this inquiry as complete and thorough as possible, by collecting what is already known upon this subject, with the details of cases of this character occurring in the practice of other physicians, I am free to confess that, from the limited number of cases of which I have been able to procure authentic and satisfactory details, even these combined facts may form but insufficient data, from which to draw any useful conclusion.

One would suppose that a combination of this character, attended with such disastrous results as frequently accompany an attack of pneumonia during pregnancy, involving, in nearly half of the cases in which it occurs during gestation, the life of the fœtus, and greatly increasing the maternal mortality, would attract the attention of medical writers, and suggest at least a careful investigation of the facts observed, if it did not merit further consideration. This, however, does not appear to have been the case, except in a few instances, since from an examination of the works of many authors treating upon medicine or obstetrics only six refer to the subject at all, while from these writers, if we except Lusk and Cazeaux, the occurrence of pneumonia during utero-gestation, with its consequent effects upon pregnancy, and the reciprocal influence of that condition upon the course and termination of the disease, has received but a cursory mention.

It may be that this is due to its infrequent occurrence, and the fact that the pathological condition and treatment of the disease

are essentially the same when it attacks the pregnant woman as when it occurs in the non-pregnant female, and that when it has been stated that pregnancy affects the course and termination of pneumonia prejudicially, the subject has been fully discussed, and nothing more remains to be said.

Still, to the medical practitioner engaged in active practice, who is liable to meet with a case of this character, a knowledge of the reciprocal relations between pneumonia and gestation will not come amiss; and he who fully understands and appreciates their importance will have less cause to feel chagrined at the result of his treatment. Unfortunately, the facts observed by medical writers which I have been able to collect, are of such a character as to be of very little value; numerically weak, meager in detail, and contradictory in statement, they afford little information upon this subject.

It is true, that regarding the fatal character and infrequent occurrence of pneumonia during pregnancy, there is great unanimity of opinion, otherwise the statements and inferences of authors are often diametrically opposite and unreconcilable; the justness of the above statement being obvious from an examination of the comments and conclusions of medical writers who have considered the subject of sufficient importance to refer to it. Grisolle, who appears to have furnished data from which several authors have drawn their facts and conclusions, collected the details of fifteen cases. Of these fifteen cases, ten occurred prior to the sixth month, four of which aborted on the fourth, fifth, sixth and ninth days of the disease; in three of these, abortion was followed by diseases of the lungs of the severest type, all proving fatal three or four days after. The six who did not abort died without exception during the progress of the disease. Of the five women who had reached an advanced stage, two were seven months pregnant when attacked with pneumonia; one was delivered prematurely on the twelfth and the other on the fifteenth day, both dying two days after. The three others were in their ninth month; two were delivered of living children on the seventh and eighth day of the disease, the other died undelivered on the fifth day.

From these facts, observes Cazeaux, it may be concluded that abortion usually follows an attack of pneumonia during pregnancy,

and that this result is more favorable than otherwise; while the prognosis is more discouraging before than after the seventh month. Lusk does not concur in these conclusions; in his opinion pneumonia occurring during gestation produces abortion or premature delivery, the frequency of these results increasing in direct proportion to the duration of pregnancy; the type of the pulmonary inflammation being more severe in the later stages of utero-gestation, while parturition exerts an unfavorable effect upon women when attacked with this disease, in proportion as their pregnancy is advanced.

Playfair and Wilson Fox speak of the fatal character of the disease when associated with pregnancy; refer to the cases collected by Grisolle, but disagree as to the number of these cases, and the rate of mortality; Playfair makes the number fifteen, with eleven deaths, while Fox gives the number as eighteen, with only a death rate of eight. But the climax in the diversity of opinions among medical writers who have referred to the subject, is found in the statements and inferences of E. Verrier, who, like Grisolle, collected the details of a number of cases of this kind, which were susceptible, however, of a different interpretation, and with which he attempts to overthrow with a general denial, the superstructure of facts founded upon these cases of Grisolle.

To this author, "pneumonia, when it attacks the pregnant woman, has no more significance than when it occurs in the non-pregnant female." His facts reduce the rate of mortality to 2 in 17, about 11 per cent., while he says, that "the time of gestation has no effect upon either the severity or mortality of the disease, and that abortion before the seventh month is no more certain than premature delivery after that period, both being favorable terminations." In contrast to this last statement, J. Hofmeier formulates the known facts upon this subject as follows: "The gravida, when an acute febrile disease is superadded to her condition, is no more endangered than is a non-gravida affected by the same disease; *except when the fœtus, in consequence of the mother's sickness, dies, and abortion or premature delivery occurs during the course of the febrile disease.*"

I have quoted at length, and nearly verbatim, the opinions and conclusions of these authors, to enable you to judge of their statis-

tical value. Based upon a few isolated cases in each instance, they represent the deductions drawn from these individual tables; and the discrepancies manifest in their opinions and inferences would appear to have been, from this cause alone, unavoidable, and constitute a reasonable objection to any conclusions drawn from facts of this character; and without any desire to prove or disprove a particular theory or inference, but with the purpose of investigating, more fully, the phenomena observed in the course of pneumonia when it attacks the pregnant woman. I have endeavored to collect from the practice of physicians as many cases of this character as possible, together with such facts as may have come under their observation that will help to explain the reciprocal relations between pneumonia and gestation.

To facilitate the comparative examination, to which I desire to call attention, I have arranged, in two tables, the cases already recorded and those which I have been so fortunate as to collect.

Cases Collected by Grisolle.	Abortion before 7th month.	Premat. Deliv.	Died.	Recovered.	Remarks.
In 15 cases, 10 occurred before 7th month	4		3	1	Abortion, followed by disease of severest type.
The 6 who did not abort			6		
Of the 2 in the 7th month		2	2		Delivered on 12th and 15th day, both dying 2 days later.
The 3 in the ninth month		2	1	2	Gave birth to living children on 7 and 8 day.

Cases Occurring in the Practice of and Reported by—	Time of Attack.	Day of Disease.	Day of Disease.	Day of Death.	Duration.	Remarks.
Dr. T. F. Rochester, Buffalo, N. Y.	3d m.				14 da.	
" Wells, Smethport, Pa	" "				28 da.	Delivered of twins at term.
" S. S. Bedient, Little Valley	" "	7		8th.		
" Saunders, Belfast, N. Y.	4th m				9 da.	
" W. B. Alley, Nunda, N. Y.	" "				18 da.	
" Hibbard, Olean, N. Y.	" "	8		12th.		
" W. B. Alley, Nunda, N. Y.	5th m			11th.		Broke out with measles on 7th day.
" Wells, Smethport, Pa.	" "				2 mo.	Had double pneumonia.
" Lyman, Hume, N. Y.	" "				15 da.	
" J. M. Scudder, Cincinnati, Ohio	" "	3				Recovery very slow; no motion felt after 1st day.
" " " " "	7th m		7th.			" " " " "
" A. T. Woodward, Vt. Med. Col.	" "				18 da.	Occurred with measles.
" Lyman, Hume, N. Y.	" "				18 da.	
" W. H. Sage, Olean, N. Y.	" "		7th.	11th.		Child born; lived 6 hours.
" Van Peyma, Buffalo, N. Y.	8th m		8th	12th.		
" J. M. Scudder, Cincinnati, Ohio	9th m		5th.	Died.		Time not given; no motion of fœtus felt after 1st day.
" M. D. Mann, Buffalo, N. Y.	" "		Term.			

You will observe from an examination of these tables that pneumonia, when it does occur in the pregnant woman, is more frequent before the seventh month of gestation; since in each table about two-thirds of those attacked were less than seven months advanced, a circumstance also noted by Ricau, who states that of 43 cases of this character 28 occurred in patients gravid less than 180 days. Abortion is also less frequent during this period of utero-gestation, while premature delivery after the seventh month very often results; as a reference to the tables will show, that of twenty cases only seven aborted—35 per cent.—while in the twelve remaining cases premature delivery took place in eight—66 per cent.—an occurrence which accords with the statement of Lusk that "the frequency of abortion or premature delivery occurs in direct proportion to the duration of pregnancy."

With reference to the rate of mortality the two tables vary, except regarding the rate of mortality in the cases where abortion or premature delivery took place, in which respect they do not materially differ; however, the fact that they do disagree upon this point is not to be wondered at when we reflect that the treatment of the disease has something to do with this result, the same circumstance being accountable, according to Andral, for the disparity observed in the death rate of pneumonia given in different statistics, the variation ranging from 2 to 33 per cent. As to the infrequency of the occurrence of pneumonia during pregnancy, all writers and observers agree, and when we consider that pneumonia is a disease depending largely upon climatic conditions as exciting causes, and which occurs in adult life less frequently in the female than in the male, and the circumstance that pregnancy does not create a proclivity to pneumonia, and lastly the proportion of pregnant women to the female sex, together with the immunity enjoyed by the former from climatic influences, in consequence of the pregnant condition, it is not surprisingly infrequent.

In regard to the causes or circumstances which enter into the production of abortion or premature delivery, authors do not agree, there being still much confusion in the statements of medical writers, as well as great diversity of opinions as to the true explanation of these results. Grisolle thinks that its disastrous influence is

tical value. Based upon a few isolated cases in each instance, they represent the deductions drawn from these individual tables; and the discrepancies manifest in their opinions and inferences would appear to have been, from this cause alone, unavoidable, and constitute a reasonable objection to any conclusions drawn from facts of this character; and without any desire to prove or disprove a particular theory or inference, but with the purpose of investigating, more fully, the phenomena observed in the course of pneumonia when it attacks the pregnant woman. I have endeavored to collect from the practice of physicians as many cases of this character as possible, together with such facts as may have come under their observation that will help to explain the reciprocal relations between pneumonia and gestation.

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explained by the importance of the organ affected, by the gravity of the disease, the intensity of the general reaction, and the numerous sympathetic disorders which are produced in all the functions. To these conclusions Tanner offers some objections that appear reasonable and just; he believes that the importance of the organ affected has nothing to do with these results, as a like effect is not observed in pulmonary phthisis; neither does it appear, says this author, that the gravity of the disease, or the inflammation, *per se*, has anything to do with it, since in encephalitis, pleuritis, hepatitis, or enteritis, the intensity of the fever and general reaction is as severe as in pneumonia, and yet these disastrous results do not follow.

The true explanation, he observes, is to be found in the condition of the blood, which, as is well known, is deficient, during an attack of pneumonia, in chloride of sodium, and since a larger proportion of fixed chlorides is found in the texture of the fœtus than in the adult, the deprivation of this salt tends to destroy the vitality of the fœtus, in consequence of which abortion or premature delivery takes place; and even though the child be born alive, from this cause it does not survive many hours.

This is certainly an ingenious explanation, and worthy of further investigation and study than this paper will permit. Founded upon two well known facts, viz., the absence of chloride of sodium in urine of patients attacked with pneumonia, and the excess of chlorides in the textures of the fœtus, it is by no means an untenable proposition, and in the absence of a better might suffice. It is open to objections, however, since a dimunition of the quantity of chloride of sodium in the urine is common to a great number of febrile diseases, some of which are as likely to attack the pregnant woman as pneumonia, yet when they do occur are not accompanied by abortion or premature delivery; and, further, the absence of chloride of sodium in the urine during pneumonia does not necessarily imply a total deprivation of this salt in the blood, the partial absence of which would appear to be governed by some of the general laws of pyrexia, which create an elective tendency toward inflammatory processes, in which rapid cell formation takes place; nor is it at all certain that even though this partial deprivation exists in the blood, the vitality of the fœtus would suffer so

soon in consequence of a withdrawal of this proximate principle.

Playfair ascribes the results to hyperpyrexia, as in the severe continued fevers. An interesting observation made by J. Hofmeier as to the effect of the maternal temperature upon the fœtal pulse, may be properly considered in connection with this part of our subject as elsewhere. These observations are shown in the annexed table:

Mother's Temperature.	Fœtal Heart.
105 F.	180
104 F.	160
100 F.	140
99 F.	132

This was a single observation made upon a case of erysipelas occurring during pregnancy; the patient was at the end of gestation, did not abort, but at the end of the fever gave birth to a healthy child; hence this explanation of Playfair is not altogether satisfactory, since in this case, and in other acute febrile diseases, the same conditions of temperature exist without producing these effects.

Lusk concludes that abortion, when it occurs in consequence of an attack of pneumonia, is referred to fœtal death; caused by deficient oxygenation of the maternal blood, by placental anæmia produced through an inadequate supply of blood to the left side of the heart, and by the abnormally elevated maternal temperature.

No doubt the above circumstances or maternal conditions are sufficient to produce fœtal death, followed, after an interval of varying length, by expulsion of the fœtus. Prof. J. M. Scudder, commenting upon the cases of this character occurring in his practice, says, "in each instant no motion was felt after the first day of the disease, abortion or premature delivery following a few days later."

But fœtal death is not alone accountable for abortion or premature delivery, since in about forty per cent. of premature deliveries in these tables the child was born alive, and when it is taken into consideration that during the earlier months of gestation, the demand for oxygen being less, the fœtus is not as likely to suffer from these disturbing causes, enumerated by Lusk, the percentage in abortion might reach a higher figure; however this may be, it is impossible to determine, since any cause operating to the detriment of

the fœtus would produce its death before the sixth month, by disturbing the intra-uterine relations between the fœtus and its maternal connections; and to say, prior to this date, whether death preceded the expulsion of the fœtus or occurred in consequence, would require a delicacy of observation seldom witnessed in a casual observer. I am inclined to believe, however, that regarding the causes which produce fœtal death, asphyxia is the most frequent and probable, when this result occurs in consequence of an attack of pneumonia; the impediment offered to the pulmonary circulation on account of the consolidation of lung tissue preventing the return of an adequate supply of blood to the left side of the heart, and the disturbance of the general circulation, evidently are sufficient to suspend the utero-placental circulation, depriving the fœtus, as they do, of the means of respiration, and necessarily leading to its rapid death.

But when premature delivery takes place during an attack of pneumonia, and the child is born alive, I am convinced that this result is due to the accumulation of carbonic acid in the system, which, in consequence of the disturbance in the pulmonary circulation collects in the blood, and being an excitor of the spinal cord and of the muscular tissue as well, originates uterine contraction. It is due to this circumstance that abortion frequently takes place in the anæmic pregnant woman; owing to the sluggish pulmonary circulation induced by innervation of the heart and the tendency to stasis of the blood in the pulmonary cappillaries when imperfectly aerated, carbonic acid accumulates, excites reflex action which indirectly brings about uterine contraction, or, acting directly upon the muscular tissue of the uterus produces the same result; and hence when there is superadded to this sluggish movement of the blood through the capillaries of the lungs a consolidation of the lung tissue, a further impediment is offered to the free exhalation of carbonic acid, and the tendency to reflex action is manifestly increased.

We will now consider the causes or circumstances which influence prejudicially the termination of the disease, and in estimating the mortality of pneumonia when it attacks the pregnant woman it must be borne in mind that while the disease is of less frequent

occurrence in the female than in the male, the death rate is greater in the former than in the latter, being in inverse proportion to the frequency of its occurrence. This constitutional susceptibility on the part of the non-pregnant female to succumb more readily to the influence of the disease, must be enhanced to a considerable degree in the pregnant woman, who, burdened with the dual function imposed upon the heart, already weakened by the important changes in the composition of the blood and the disturbance of the several functions, in consequence of the many direct and reflex sympathies between the different organs incident to the pregnant state, is indeed but poorly fortified against an attack of pneumonia.

Respecting the exact nature of pneumonia this paper has nothing to do; it will be sufficient to state that the mode of death is usually failure of cardiac power; while of all circumstances which influence the prognosis of the disease, that which is perhaps the most important is the state of the general health. In weakly subjects and those whose constitutions have been damaged by previous disease, by privation, or by the retention of any morbid material in the blood, or an impoverished condition of this fluid, as in uræmia, septicæmia, or chlorosis, acute pneumonia is exceedingly dangerous. Between the debilitated condition of anæmia and pregnancy a close analogy exists; the disturbance of the functions of the digestive organs, having impaired the general health and deteriorated the blood, reducing the proportion of red globules from a standard of 127 to 104, and greatly increasing the amount of fibrin in the blood as well as the amount of water, it is not strange that when pneumonia occurs in gestation, and especially when abortion attended with profuse hemorrhage takes place, it should be so extremely fatal; and it does not appear to be necessary to seek outside of the condition of the pregnant woman for a special cause, since pulmonary œdema, in consequence of a venous pulmonary engorgement caused by failure of heart power, might become a powerful cause in the production of the increased fatality. Lusk says: "The fatal character of pneumonia during pregnancy is due to a co-existing hydræmia, and in consequence of the inability of the heart to restore the balance of a pulmonary circulation disturbed by the consolidation of lung tissue." But Prof. M. D. Mann does not

regard hydræmia as a common condition in the later months of pregnancy, and considers "the large amount of fibrin in the blood of pregnant women, with the consequent tendency to formation of heart clots," to be an important factor in the increased death rate. Playfair thinks that "the cause of the maternal mortality is not quite apparent, since the same danger does not appear to exist in severe bronchitis and other inflammatory affections." But further speculation would be profitless and barren of results. I have endeavored to give you the facts bearing upon the subject, as I have found them, together with such additional information as I have been able to collect. If these facts furnish sufficient data from which we may draw some useful conclusion, I am content, believing that the study and investigation of this subject has fully compensated me for the labor involved.

RECENT ADVANCES IN THE METHODS OF STUDYING THE HEART.

BY WILLIAM GILMAN THOMPSON, M. D.
New York.

The intimate mutual relations long known to exist between certain diseases and functional disturbances of the heart and those of the kidneys, liver, lungs and other viscera, which occasion decided alterations in vascular tension and in the quality of the blood, make the experimental investigation of the movements of the heart, under varying conditions, of perhaps greater practical importance than any other branch of physiological research.

Within the past four or five years a decided advance has been made in this direction, both in establishing new data and in illustrating clearly well known facts.

The stimuli to which the heart responds are the stimuli of protoplasm in general, and they are briefly classed as (1) mechanical (pressure, pricking, etc.); (2) thermic (warmed blood in circulation, topical application of heat and cold); (3) electrical; (4) chemical (drugs, etc., applied externally and through the circulation); (5)

stimuli applied through distant nerves, reflex action, etc. The mammalian heart, if excised rapidly and plunged into artificial serum, kept at a proper temperature, will beat of its own accord for some minutes, and for some time thereafter will actively respond to various stimuli; but the conditions of its action are so different from the normal, that deductions from such experiments are, though interesting, of little practical value.

In 1881–82 Prof. Martin,* with his assistants,† at the Johns Hopkins University, devised an ingenious method for keeping the mammalian heart pulsating for many hours under conditions of circulation which more nearly approach the normal than do any previous means employed. This method is briefly as follows: The animal is anæsthetized and placed in a chamber kept suitably warm and moist; a canula is fastened in the trachea, and artificial respiration is rhythmically maintained throughout the experiment by a small water engine. A canula inserted in the superior vena cava communicates with a reservoir, from which defibrinated blood flows through the superior vena cava into the heart. The inferior vena cava is ligated. A canula inserted in the left carotid artery communicates with a mercurial manometer, which records the arterial pressure upon a revolving drum. Another canula placed in the right carotid artery permits the free outflow of blood into a measuring beaker. A clamp placed upon the right carotid regulates the amount of arterial resistance. The aorta is ligated beyond the origin of the carotids. The circulation of the blood is, then: From the reservoir through the superior vena cava to the right side of the heart, thence in the normal manner through the pulmonary circuit, which has not been interfered with, to the left side of the heart, and out through the right carotid artery into a receptacle. It is obvious that increasing the pressure of the defibrinated blood contained in the reservoir will increase the amount of blood entering the heart, and raise the venous pressure, and that compressing or relaxing the clamp upon the right carotid artery will respectively increase or diminish the arterial resistance and alter the velocity of the arterial blood current. The experiments made in this manner were chiefly directed

*Martin; studies from Biol. Lab., Johns Hopkins Univ. Vol. II., No. 2, p. 213.
†Howell and Donaldson; Philosoph. Translations Royal Soc. Part 1. 1884. P. 135.

toward determining the amount of work done by the heart under varying degrees of venous and arterial pressure; the maximum quantity of blood ejected from the left ventricle at each systole; the relations between the pulse-rate and the work of the heart; and the effect of varying temperature of the blood. (The "work of the heart" is the measure of the energy expended by the heart in overcoming the resistance of the arteries.) An extension of such experiments to ascertain the influence of drugs upon the work of the heart would be invaluable and will doubtless soon be undertaken. The influence of altered temperature of the defibrinated blood, and also of the air employed in the artificial respiration, produced far more impression upon the pulse-rate than did any alterations in blood pressure, venous or arterial; a fact which should be more closely investigated in relation to the therapeutics of hyperpyrexia. Among the many valuable facts ascertained regarding the work of the dog's heart, the following are the most interesting in the suggestions which they offer regarding the mechanism of cardiac hypertrophy, vaso-motor dilatation and contraction, mechanical obstructions to the circulation, the amount of fluid in the plasma, etc.

"The most direct factor influencing the quantity of blood sent out from the ventricle, and hence the work done by the ventricle, is the intra-ventricular pressure by which the ventricle is distended during diastole."

"Variations of arterial pressure from 58 mm. to 147 mm. of mercury have practically no effect whatever on the quantity of blood sent out from the ventricle at each systole," but "the work done by the left ventricle varies directly as the arterial pressure against which it works, within the limits named above." The work done by the left ventricle at each systole increases with the venous pressure, but not proportionally, up to the point of maximum work."

It seems "probable that the left ventricle during life is distended during each diastole to about its maximum capacity."

It probably also completely empties itself with each systole. In a dog the time required for all the blood in the body to pass through the left ventricle is 27 seconds, during which time there are 54 systoles.

Other conditions remaining the same, lessening of the pulse-rate causes more blood to be ejected at each ventricular systole, and consequently an increase of the work done at each systole and vice versa. There is no constant relation between the weight of the heart and its work.

The method employed by physiologists* for determining the

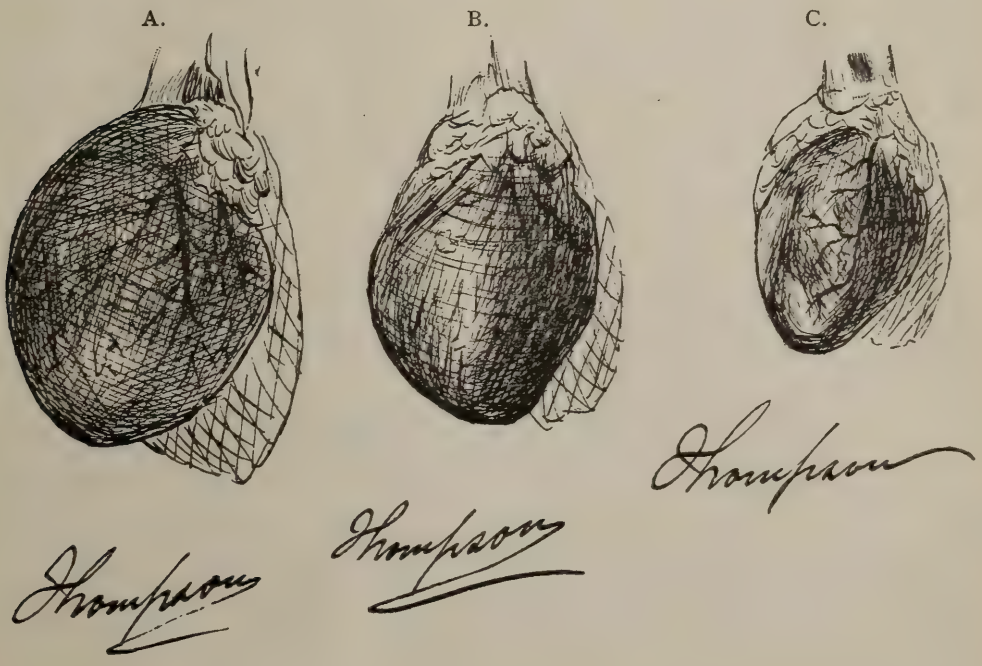
* Gaskell; Jour. of Physiol. Vol. III., pp. 48-61. Brunton; Pharmacology, Therapeut. and Mat. Med. 1885. Pp. 269–271.

action of drugs upon the power of contraction of the heart muscle, independent of its nerves, is the following: In a frog or tortoise the lower two-thirds of the ventricle, which is known to contain no ganglia, is tied off by a ligature. A double canula is inserted in this portion of the ventricle. A nutritive serum is supplied through one-half of this canula, and returning through the other half, it passes to a mercurial manometer, which is arranged to record variations in the pressure of the fluid. Different drugs may be added to the serum, and any alterations which they produce in the force or rhythm of the contraction of the apex of the ventricle (which keeps on pulsating by itself when properly nourished) are communicated to the registering apparatus.

I have recently made a series of experiments with living hearts pulsating in situ, which have proved so successful that they are briefly recounted here. By means of instantaneous photographs taken upon gelatine dry plates, I have succeeded in getting very good views of the heart in full diastole, and in full systole, and in any number of intermediate degrees of contraction.

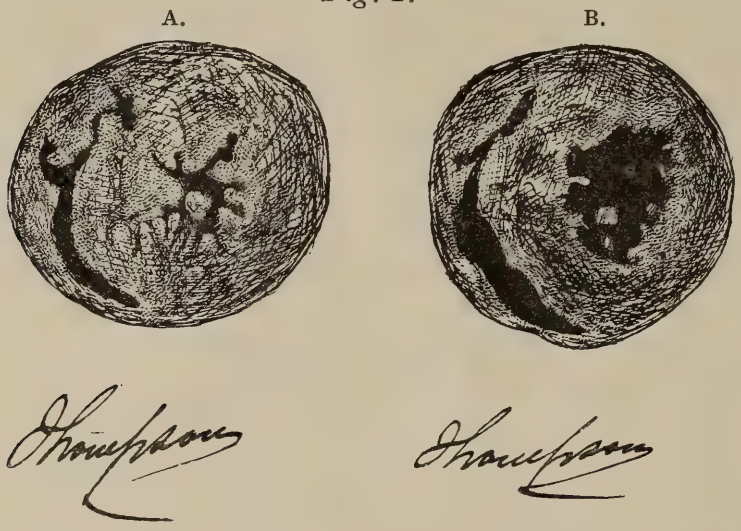
Having thus obtained a normal series for comparison, I have photographed the intensified contractions of the heart produced by various drugs, such as digitaline given hypodermatically, nitroglycerine applied topically, etc.; by mechanical irritation; by hot salt and water, etc. An illustration of the latter is seen in *fig. 1*,

Fig. 1.



which is reproduced from the original photographs. Moreover, I have obtained very fair views of the interior of the mammalian heart in different stages of contraction (*fig. 2*). The procedure is

Fig. 2.



simple, the chief difficulty being to obtain sufficient light for indoor work in mid-winter. The animal is etherized; the chest rapidly laid bare, hemorrhage being checked as far as possible; the pericardium is removed and a small disc of white celluloid is slipped behind the heart, like a collar. A spray of warm physiological salt solution keeps the parts from drying. The celluloid simply acts as a good background to throw the heart into bold relief from the surrounding tissues, which would otherwise produce a blur, and it is so placed as in no wise to interfere with the action of the heart; it is kept clean from blood by the spray, and it does not become sticky like wet card-board. Artificial respiration should be maintained. The heart is illuminated by direct sunlight, and photographs are taken with a common "instantaneous drop-shutter," giving an exposure of about $\frac{1}{10}$ of a second. This is quite rapid enough for the usual rate of pulsation, and not too rapid to secure very good results with indoor work in an ordinary room.

The photographs can be made to illustrate many facts in both materia medica and physiology, and when the same conditions of focal distance, etc., are observed, they furnish an absolutely accurate measure of the changes of form, size and position of the heart all at once, which I have been unable to obtain in any other way,

such as drawing the image of a beating heart projected upon a screen by a modified magic-lantern, or by supplying linear measures, casts, etc.

A standard normal systole and diastole can always be first obtained for comparison with photographs of the same heart under the influence of any stimuli. The photographs may be studied at leisure, when many interesting details, often overlooked, become apparent. The negatives may be used in a stereopticon illustration upon a very large scale.

The changes in the interior of the heart produced by an extreme systole are very instructive. If the beating heart be quickly cut in two across the ventricles, a photograph of diastole can be taken, and a systole, partial, or complete, is then easily produced by artificial stimuli, and at the instant of its occurrence it is photographed.

To make the work thoroughly scientific, there should be an automatic electric communication between a lever placed upon the heart and the shutter of the camera, and a series of gelatine plates set in a disc or revolving drum should be successively exposed with each drop of the shutter. Apparatus of this kind would be elaborate and expensive, and I have as yet only experimented with the simple means described, but the results thus far secured in a large number of photographs of living hearts in different animals, are so encouraging as to lead me to hope that others engaged in the special investigation of the physiological action of drugs, will record their experiments by instantaneous photography.

The value of the photographs can of course be enhanced by making simultaneous observations, such as manometric tracings, etc.

I have applied the same method, with equal success, to the study of intestinal peristaltic waves as affected by drugs and other stimuli; and some of my photographs of the heart, taken when it was nearly exhausted, show well the peristaltic contraction of the right ventricle continuing after the left ventricle has ceased to beat. I have also taken a series of instantaneous photographs of the heart beating in a glass vessel in a transparent nutrient fluid.

49 East Thirtieth St.

NOTE.—The illustrations accompanying Dr. Thompson's paper were photo-engraved from the original photographs; only, for sake of clearness, everything but the heart has been omitted. They may be relied upon as exact.—ED.

LANOLIN---A NEW BASIS FOR OINTMENTS.

By Prof. Dr. Liebreich,
Professor of Pharmacology in the University of Berlin.

Read before the Berlin Medical Society, and Translated Expressly for the Medical Press by Ernest Wende, B. S., M. D.

Gentlemen: In presenting to you the subject Lanolin as a new basis for ointments, I am far from declaring that all questions regarding its pharmacological uses are already solved.

Lanolin is so peculiar a substance that its varied employment will constantly bring new qualities to light, qualities which, as can already be foreseen, belong neither to glycerine fats nor to mineral oils. However, the investigations I have made enable me to affirm, even now, that Lanolin as a basis for salves and ointments answers many demands which the glycerine fats and mineral oils (such as vaseline) at present in use, have not been able to fulfill satisfactorily.

The use of plasters and salves, which at different times was considered but a subordinate therapeutic method, has again been drawn into the region of scientific research—treatment by local application being now considered of great value in many forms of disease.

If in what follows I speak of fats, these must be distinguished from the fatty substances so called in a strictly chemical sense. To quote Kekulé's admirably precise definition, "The groups of fatty substances embrace all bodies in which we can suppose the carbon-atoms to be arranged in the simplest manner possible," whilst in a closer sense those substances are called fats that are changed by chemical decomposition into glycerine and fatty acids. It seems to me, from a pharmacological point of view, this classification is too narrow, and the qualities common to a quantity of substances formed in the animal organism can be better overlooked by the help of a different arrangement.

All these substances, and they are chiefly æther-like combination, which are changed by decomposition into fatty acids of the stearic acid group ($C_n H_{2n} O_2$), or of the oleic acid group ($C_n H_{2n-2} O_2$),

may be considered as fats. Thus, many substances that have evidently a close physiological relation are brought under one head. Under this arrangement, protagon, the existence of which has again been proven quite lately, and lecithine, in spite of the nitrogen it contains, would be counted among the fats. The waxes, too, which are in most combinations of fatty acids with mono-atomic alcohols, would thus also belong to the fats, although their physical qualities differ from those of glycerine fats, and though the cerotin-acid, made from wax, is a special characteristic of this substance. Cetaceum, too, the fat of cetyl-alcohol, though widely different from wax and from glycerine fat in its physical qualities, thus evidently belongs to the fats.

A discovery made in the year 1868 by Fr. Hartmann and E. Schulze was of great importance for my investigations. These gentlemen were able to show that in the fat of sheep's wool fatty acids combined with cholesterin occur as fats of a peculiar nature. E. Schulze, later on, demonstrated the existence of isocholesterins combined with fatty acids. We have here a series of fats previously unknown in connection with the animal organism. It is well known that cholesterin belongs to the substances frequently found in the animal organism. It is the more remarkable, therefore, that physiologists should have given so little attention to this observation of Hartmann and E. Schulze.

I must not omit to mention that these combinations have been known as pure chemical substances since Berthelot's admirable researches in the year 1860. Berthelot had succeeded in obtaining most varied cholesterin-fats, by treating cholesterin and fatty acids. He even suggested that this fat might be found to play a part in the animal organism, though it is true he brought forward no proofs in support of this theory. The discovery of isocholesterin by E. Schulze leads at once to the supposition that the various qualities characteristic of the glycerine fats might be found also to belong to the cholesterin fats. Their existence in sheep's wool having been recognized, the question arose, whether this must be considered an isolated occurrence, such as the presence of cataceum in the skull cavity of the whale, and in the coccygeal gland of the goose (glandula uropygii), or whether the cholesterin fats are as widely different as the glycerine

fats. In tracing out the cholesterin fats in the animal organism, I was assisted by the reaction for cholestol, a substance closely related to cholesterin, discovered by C. Liebermann. The reaction is an extremely simple one. The fat to be examined, and but a very small quantity is necessary, is dissolved in the anhydride of acetic acid (not to be confounded with concentrated acetic acid). By an addition of concentrated sulphuric acid, a pink color is formed, which soon changes to a decided blue and green. Great care must be exercised in pouring out the sulphuric acid. The less acid is added the clearer the reaction will prove. My assumption that the cholestol reaction would be found practicable for cholesterin fats, was confirmed by experiment. Cholesterin fats in which no trace of free cholesterin could possibly be contained, showed the cholestol reaction with perfect distinctness. On the other hand, I was able to demonstrate that glycerine fats of the most varied composition do not give the cholestol reaction. Protagon, lecethin, cetaceum and bees-wax also gave a negative result.

Keratinous tissues were first subjected to examination. I mention human epidermis, hair, vernix caseosa, whalebone, tortoise-shell, horn-shavings (cow), beak of jay, feathers of geese, fowls, turkeys, pigeons, spines of the hedgehog and porcupine, hoof of the horse, horn of sheep's foot, hair of the sloth (Brandypus cuculliger).

In all these keratinous tissues, the presence of cholesterin fat, procured by means of chloroform extraction, was demonstrated by the help of the cholestol reaction. In the case of the penguin alone no trace was found. I did not rest satisfied with this reaction alone, but made use of the power of absorbing more than 100 % of water peculiar to cholesterin fat. This quality which was first demonstrated with exquisite precision in the case of the fat procured from wool, I have given the name " to lanolize," and I was able to show its existence in almost all the fats procured from the above-named substances. I was able to prove, also, that a mixture of glycerine fats and cholesterin does not lanolize.

If the subcutaneous fatty tissue be subjected to extraction, the fat shows either no cholestol reaction at all, or one so slight, that it need not be taken into account. On the other hand, fat of the kidney and liver gives a decided cholestol reaction, as does also the fat

procured from the blood of a rabbit. Whether the fat belongs to the kidneys and other organs themselves, or whether its origin is in the blood, is a question that must be left to future investigations.

In the course of my investigation it was further of interest to solve the question whether the cholesterin fats belong to the tissue itself, or whether, as is often assumed, they are supplied by glandular secretion. The theory most widely diffused is that the feathers are oiled from the coccygeal gland of the birds. In Chapter 21, *De perunctio* of the work "Kaiser Friedrich, II.," we find the statement that the coccygeal gland serves to oil the feathers, so that water may better flow from them, and also that the gland is supposed to possess poisonous properties. This theory, which in the work of Friedrich II. has reference chiefly to falcons, has been maintained until the present day, as we see from Robby Kossman's research on the coccygeal glands of birds. I am by no means prepared to deny that the secretion of the gland, when brought upon the surface of the feathers and there dried, may produce a certain suppleness.

But the investigations I have made enable me to assert with equal weight that the fluid secreted by the gland serves to free the feathers from too great a profusion of fat, or at least to spread the fat secreted by the feathers evenly upon them.

There are birds without any coccygeal gland; many species of the parrot and the fan-tailed pigeon. It is true that the feathers of these birds have a less shiny appearance, and it was important, therefore, to ascertain whether cholesterin fat be contained in the feathers of the fan-tailed pigeon. Experiment proved this to be the case, although the quantities found were but small. Thus the conclusion is warranted that these birds require no coccygeal gland, the secretion of fat from the feathers themselves being so slight. We even see that the columba militaris performs its flight in spite of rain, and not being furnished with a coccygeal gland secretes sufficient fat from the feathers to protect them from "madefactio." Since birds are not furnished with any fat glands on the skin except the coccygeal gland, it may be assumed that the fat is formed in the feathers simultaneously with the keratin. As regards hairs it is generally believed that the fat contained in them is furnished them by the fat glands.

Sheep are furnished with a great many fat and sudoriferous glands, so that their case cannot help in deciding the question whether intra-cellular or additional fat ever occurs alone. But cholesterin fat is also present in hog's bristles, and in the bristles of the hedgehog. We know that these animals possess but rudimentary fat glands. An abundance of cholesterin fat has been found in the bristles of the porcupine. To my regret, I have not been able to ascertain whether here too the fat glands have been defective.

In coming to a conclusion, it was most important to examine an animal, the hair of which is furnished with absolutely no accompanying fat glands. Leydig gives the Brandypus cuculliger as such an animal. In the few hairs from the fur of this animal which I was able to obtain, the cholestol reaction was clearly shown.

The fat glands assuredly bring some fat upon the surface of the hair, and are able to keep it supple, but this fat is altogether distinct from the fat contained in and formed by the keratinous substance.

In support of these views, I may mention a case observed by Dr. Lassar, where in spite of hypersecretion of the fat glands, the hair was found dry and brittle.

An examination which I made of the fat of the coccygeal gland of a goose, was in favor of my theory. I obtained but a very slight cholestol reaction, thus confirming de Jonge's researches, who found a cetaceum-like fat in this gland. In the fat of the subcutaneous fatty tissue surrounding the coccygeal gland, there was also no trace of a cholestol reaction, whereas the fat from the feathers proved itself distinctly to be cholesterin fat.

A still more decisive proof of the occurrence of cholesterin fat in keratinized cells lies in the fact that cholesterin fat is abundantly found in the hoof of the horse, although the case here be no question of glandular secretion.

I do not wish to deny that keratinous tissue containing a fat other than cholesterin fat may occur here and there; but in the whole course of my investigations the penguin was the only case where I could not demonstate the presence of cholesterin fat; some other fat seems to take its place in the horny tissues of this animal.

Bearing in mind the theory now generally adopted in all fat investigations, and so clearly expressed in *Virchow's Cellular Pathology*,

fat may occur in the animal organism either as the normal contents of the cells, or as a transitory fat in the same,—for instance in the intestinal epithelial cells; or, finally, as a necrobiotic fat after the destruction of the cells—such as milk, for example. It is extremely probable that cholesterin fat will find its place in this classification of the occurrence of glycerine fats. It is easily made into an emulsion, so that it would have no difficulty in entering the intestinal-epithelial cells. The proof must be left to future investigation. I do not feel justified in assuming that cholesterin fat is contained in the keratinous cells, or in the stratum granulosum of the epidermis from which the keratinous cells are produced in the same way as in the fat cells. But if we assume the keratinous cells, which are destined to be thrown off, as about to become necrobiotic, we must look upon cholesterin fat as a necrobiotic fat, such as butter.

Eleïdin, a peculiar substance, the chemical composition of which has not been satisfactorily ascertained, occurs in the stratum granulosum of Auffhammer, and was first described by Ranvier.

Waldeyer supposes it to be connected with the hyalin of Recklinghausen, whilst Ranvier, Zabludowsky and Unna incline to the view that it has to do with the formation of keratin. However, the micro-chemical reactions proposed by Ranvier, Waldeyer and Unna speak more in favor of the albuminous nature of the eleïdin. I can not feel as certain as Ranvier, that we have not here a fatty substance ; very probably the substance called eleïdin by these authors consists of a mixture of albumen and cholesterin fat.

All these investigations were undertaken by me from the pharmacological point of view alone.

In the treatment by ointments and plasters to which of late increased attention has justly been given, glycerine fats have been employed, and during the last few years mineral fats, such as vaseline, which is produced from the waste products of petroleum-distillation.

The *Pharmacopœa Germanica ed. alt.* has admitted ungt. paraffini as a basis for salves, a substance which is produced by a mixture of liquid and solid paraffin. Well founded objections have been raised to the use of this substance.

Fat ointments are subject to decomposition that irritates the

skin, and besides this disadvantage, drugs mixed with pure fat are but very imperfectly absorbed. In the case of vaseline, there is no danger of decomposition, but it prevents the entrance of drugs into the skin, so that even poisonous substances when mixed with vaseline and rubbed into the skin produce neither local nor general symptoms of poisoning.

Unguentum paraffini is a still more unsatisfactory substance than vaseline, since even when most carefully prepared its component parts separate out after a time. Nothing is now more certain than that the ointments Ungt. Kalii Iod., Ungt. Hydrarg. rubr., and Ungt. Hydrarg. praec. albi, in their present form of paraffin ointments are totally ineffectual, and I have always advised the preparation of these ointments with fresh fat.

In examining cholesterin fats of wool, I was surprised to find how easily they were rubbed into the skin; since cholesterin fat has its origin in keratinous tissue, I am inclined to consider this absorption as connected with the speedy entrance into the skin.

To the combination of this neutral fat with water, I have given the name "Lanolin." The pure material necessary for my investigations, I owe to the kindness of Drs. Jaffé and Darmstädter, in Charlottenburg, near Berlin, who produce lanolin by transforming the wool fat into a thin milk and subjecting this to centrifugation. By this process they gain a watery substance and a thick cream. The latter contains the "lanolin" in a pure state.

The pure fat holds a place between resin and fat, as has been described by Berthelot.

Lanolin has a capacity of absorbing water superior to that of any substance known to me. More than 100 per cent. of water can be kneaded with it, thus producing a light-yellow, very plastic ointment. Lanolin does not dissolve in water, but, on the addition of soap and alkalies a thick milk is immediately formed. One of its most important characteristics is its perfect neutrality.

Lanolin being with difficulty decomposed by the action of alkalies, its self-decomposition is impossible. It absorbs glycerine with ease, and thus mixed easily combines with every other fat, and forms extremely pleasant, cream-like ointments. Lanolin has a slight smell.

A very small quantity of a five per cent. carbolic-lanolin ointment, rubbed on the hand, produces, in one to two minutes, a numbness without irritation. Lanolin-sublimate ointment is absorbed so quickly that a few minutes after the application of the ointment of 1 : 1,000 subl., the characteristic metallic taste is observed.

These few and short observations show clearly the advantage which lanolin possesses as a basis for ointments.

Translator's Postscript.—The sensation created in Berlin over this interesting discovery is great, exceeding that of 1869, when Prof. Liebreich gave to the medical profession the drug "chloral."

The excitement has caused "lanolin" to be recommended and employed for every disease possible, where the therapeutic indication is a salve or ointment.

Its property of not becoming rancid is but a small advantage compared with its prompt absorption and lasting influences upon the skin over all other fats and oils, therefore playing an important role in the department of dermatology.

As this branch of medicine more especially engages my attention, I shall seize the opportunity offered at the different clinics for diseases of the skin, and more particularly at the polyclinic of Dr. G. Behrend, for carefully observing the manner of employment and the results obtained; I shall also gather all such formulæ as acquire prominence, the same to appear in the columns of this journal.

E. W.

Berlin, January 21, 1886.

PISTOL SHOT WOUND OF THE ABDOMEN—RECOVERY.

BY M. PICKETT, M. D.,
Corry, Pa.

On the afternoon of September 26th, 1885, W. H., aged thirteen, went chestnutting with a number of his companions. On seeing a squirrel, he excitedly took a pistol from his pantaloons pocket, and in so doing it accidentally discharged. After receiving the wound he was carried to his home, a distance of over a mile. I was hastily summoned, as was also Dr. Elston. On our arrival I was directed to take charge of the boy, and after putting him under the influence of chloroform, found him in the following condition :

The ball (a thirty-two calibre, from a self-cocking revolver) entered the abdominal wall on the right side, three inches above the anterior superior spinous process of the ilium. By probing, it was found that the ball had passed obliquely downward, and apparently entered the abdomen. Cognizant of the advancement and success of abdominal surgery in recent years, I had resolved that when an opportunity presented itself I should not hesitate to open the abdomen and repair damage done. In this case I proposed to make an incision, and if the bullet could not be extracted to establish an outlet for the escape of pus, which, had it formed in a sac or pocket, would have resulted in peritonitis. As this was the first operation of the kind ever performed here, and to avoid criticism if it had proved fatal, Dr. Bonsteel was called in, and coincided with us in our plan of procedure. After passing the probe along the track of the ball, a distance of four or five inches, and leaving it there, an incision was made in the median line, which extended to the upper portion of the pubes ; by cutting down to the peritoneum the end of the probe was reached. It was removed and again inserted in the track of the ball from the opening now made. It was discovered that the ball, instead of entering the abdomen, struck the sharp edge of the pubic bone and glanced off into the left buttock. Thinking that further efforts to extract the ball were unnecessary, the patient having been given the benefit of the doubt, the two chief objects of the operation seemed accomplished :

First, it was ascertained that none of the abdominal organs were injured.

Second, that the dangers of peritonitis had been avoided.

Passing a tent of carbolized cotton cloth in the track of the ball it was freed of all irritating substances. A tent of the same material was inserted and left protruding from the entrance of the ball above, and from the lower end of the incision, so that it could be moved freely, if necessary. The incision was closed with silver sutures, and iodoform dressing applied. The patient regained consciousness very soon, and as he complained of some pain, I ordered three grains of Dover's powders to be taken every three or four hours, if necessary. From this on he made a very speedy recovery, his temperature not exceeding 101°. On the third day the tent was

removed. The incision made healed by first intention. The bullet wound rapidly healed with very little suppuration ; not over a half ounce of pus was discharged. On the tenth day I did not consider it necessary to continue my visits. At the present time he does not know but that the ball was extracted.

THE THEORY OF INOCULATION.

Professor Tyndall writes upon Pasteur's researches in germ-life, and in the course of his article gives an explanation of the secret of vaccination. He says:

When a tree or a bundle of wheat or barley straw is burned, a certain amount of mineral matter remains in the ashes—extremely small in comparison with the bulk of the tree or of the straw, but absolutely essential to its growth. In a soil lacking in or exhausted of the necessary mineral constituents, the tree cannot live, the crop cannot grow. Now, contagia are living things, which demand certain elements of life just as inexorably as trees or wheat or barley; and it is not difficult to see that a crop of a given parasite may so far use up a constituent existing in small quantities in the body, but essential to the growth of the parasite, as to render the body unfit for the production of a second crop. The soil is exhausted, and until the lost constituent is restored the body is protected from any further attack of the same disorder. Such an explanation of non-recurrent diseases naturally presents itself to a thorough believer in the germ theory, and such was the solution which, in reply to a question, I ventured to offer nearly fifteen years ago to an eminent London physician. To exhaust a soil, however, a parasite less vigorous and destructive than the really virulent one may suffice; and if, after having by means of a feebler organism exhausted the soil without fatal result, the most highly virulent parasite be introduced into the system, it will prove powerless.—*Ex.*

THE French have taste in all they do,
While we must go without;
Nature to them has given *goût!*
To us she's given gout!

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BUFFALO, N. Y. MARCH, 1886.

THE CASE OF PRESIDENT GARFIELD.

IT IS with the greatest pleasure that we lay before our readers, with this issue, a most interesting letter from Prof. Hamilton, whose contributions must always have a peculiar interest for them—in addition to their intrinsic worth—from the fact of his former residence in our midst.

Ever since the memorable sad event, to whose literature this paper is a most important addition, cheap criticisms with reference to its management have been freely circulated. Part of these were dictated by supercilious egotism; but another part were the opinions —honest, no doubt—of men without sufficient data upon which to base them. By no means the least important of the latter were the expressions of a renowned German professor, who, as Surgeon-General of the Prussian army, was in position to speak with more authority than could any of the other critics. Unfortunately, he based his statement upon a report well known to be not above suspicion. It is not likely that Esmarch knew of the lack of confidence with which Dr. Bliss' report was received at home. It is rather probable that the German surgeon, having no conception of the "mixed" condition of medical matters in this country, and naturally supposing that such an important case would be instantly placed in the best and ablest hands, mistook this report, with its pomp of authority, for an ingenuous and reliable one, and thereupon based the

criticisms, which were not only adverse, but, as Prof. Hamilton shows, were more than superfluous, were absolutely incorrect and unwarranted.

Next to its sad issue, we have always held that the most unfortunate circumstance in connection with the case was the relation borne to it by him who issued the report, and whose name always headed the bulletins—he being in no sense a surgical expert.

Misjudged and misunderstood through the statements of others, Prof. Hamilton has patiently and silently put up with the harsh criticism of Esmarch, and has never, to our knowledge, until now, done himself that justice which he has failed to receive from others. Misled by the same lack of acquaintance with the facts, we had, perhaps, along with others, failed to realize how keenly alive he was to that modern tenet in treatment of gunshot wounds, which is summed up in the expression, "the let alone policy," which interdicts all but the most necessary exploration.

We regard it, then, as a most happy accident that we inserted, in the January number of THE MEDICAL PRESS the Albers case, inasmuch as it has brought from the pen of our honored predecessor a rejoinder which must set all criticism at rest, and which seems to us a contribution to the literature of the case of the very greatest importance.

PARACENTESIS OF THE PERICARDIUM.

A monograph on the above topic by Dr. John B. Roberts, of Philadelphia, testifies to the substantial advances that are constantly being made in surgery. To know that the pericardium is now tapped without hesitation in suitable cases may be a surprise to some; and to the author of this book are we largely indebted for the investigation and development of this subject.

The operation was proposed by Riolan as early as 1649, but no record of its successful performance is found until early in the present century. Owing, probably, to mistakes made at that time, it did not gain much favor until the development of physical exploration furnished a more accurate means of diagnosis. But now we

find in the table of sixty cases presented, that thirty-five occurred during the fifteen years from 1865 to 1880.

The conditions to which the operation is applicable are, hydropericardium, pericarditis with effusion, and what may result in either case, the presence of pus. These in some cases depend upon other conditions more or less serious, which will influence the course of treatment and prognosis. Tapping is usually employed where all other means have failed, and quite properly; but, as in so many other conditions, when the time has come for surgical aid it should be employed without delay. We find that forty per cent. of the sixty tabulated cases recovered; and recovery here does not mean mere survival of the operation; for in the majority of the cases classed as fatal life was prolonged from five days to several months. This is a good showing when we consider the gravity of these cases and the fact that tapping is performed as a last resort. The operation need not be considered a very difficult or dangerous one, notwithstanding that the condition is usually serious and vital organs are in close proximity, for its successful performance depends almost entirely upon a careful diagnosis and an accurate knowledge of the anatomy of the region. The quantity of fluid abnormally present in the pericardium may vary greatly, as much as one gallon having been found in each of two cases, and it is stated that a few drachms of serum, as frequently found at an autopsy, may have transuded at or after death.

The symptoms resulting from the presence of a large amount of fluid are chiefly those due to pressure. These will generally be expressed by dyspnœa, embarrassment of the heart and venous engorgement; pain, vomiting, cough and syncope are occasional symptoms. Preceding these will be a history of pericarditis, cardiac or renal disease and tendency toward oedema in other regions. The physical signs are important. When the sac is distended the heart will have a larger range of movement, provided there be no adhesions. Accordingly, the position of the apex-beat will vary more with change of posture than it would normally. Percussion will show the area of dulness to be extended. Bauer's opinion is agreed with by the author, that a study of the relative dulness, *i. e.*, the outer zone of impaired resonance where dulness is not absolute,

is more important as showing the degree of distension, than that of absolute dulness.

In view of the frequency of adhensions, and of chronic disease as a cause, a doubt is expressed as to the value of the diagnostic point popularly taught, that the area of dulness is triangular. This doubt is strengthened by the experiments of Dr. Rotch, of Boston, who injected the pericardia of a number of subjects with melted cacao-butter, and found considerable variation from the typical triangular area. When a large amount of fluid was introduced, lateral distension was especially well marked.

Auscultation will generally reveal weakness of the heart sounds, particularly of the first. The friction sound is heard earlier in cases of pericarditis, and may even be present with considerable effusion. There are also minor signs elicited by examination in some cases, among which may be fulness of the precordial region and fremitus.

The principal troubles with which this condition is liable to be confounded are pleuritis sacculated anteriorly, enlargement of the heart and mediastinal tumors. Careful discrimination is here necessary, and if a study of signs and symptoms still leaves a doubt, in an urgent case, it is proper, in the opinion of the author, to use the exploring needle. It must be said that mistakes have been made by prominent men where, at the autopsy, it was doubtful whether the pericardium had been punctured at all.

Hypertrophy of the heart may usually be distinguished by the heavy first sound, the character of the pulse and attention to the general symptoms. More difficult will be the distinction between a dilatation of the heart and effusion, both of which have a number of symptoms in common. The character of the heart sounds will usually differ; in dilatation the first sound is generally clear and sharp, but feeble, and heard best over the apex; while with effusion the first sound is apt to be distant and muffled at the apex, but heard better over the base of the heart. Right here it occurs to us that adhesions anteriorly in case of effusion would lessen the value of this diagnostic point.

A sign pointed out by Rotch will be valuable if established by experience. This is the presence of flatness in the fifth right inter-

costal space from two to three centimetres from the sternum, as showing presence of effusion.

Although renal disease may be a cause or concomitant of effusion, it must be borne in mind that albumen and even casts have been found in the urine as a result merely of the embarrassment of the circulation due to the effusion.

The operation at the present day consists of aspiration. Several trocars have been devised with a view to having a dull point presented after introduction, so as to avoid injuring the heart. Some of these are illustrated in the work before us, and any of them would seem to answer the purpose.

Injections into the sac are not considered necessary in cases of simple effusion. In purulent cases, however, the injection of a solution of carbolic acid is advised; and in chronic purulent cases the question of an opening for permanent drainage is favorably considered.

As to the place of puncture, seven different points are offered by a number of observers, but it is shown by careful study that two of these are the most acceptable. One of these is the fossa between the ensiform appendix and the costal cartilages of the left side, and the other the fifth left interspace near the junction of the sixth rib with its cartilage. The possibility of wounding the diaphragm or liver in the former locality and the difficulty of defining the exact spot in fat persons, lead the author to adopt the latter point as a rule.

A puncture between these two points, advocated by one writer, might endanger the internal mammary artery or its branch.

The danger of puncturing the heart must not be forgotten. To avoid this in any case the needle should not be thrust too deeply, and the vacuum chamber should be opened as soon as the needle-point is buried, so as to enable the operator to know just when the effusion is reached. The needle must not be plugged by a disk of cartilage.

The accident of puncturing the heart is not as fatal as might be thought, cases being noted where improvement followed and life was prolonged for weeks and months after this had occurred.

From the table of sixty cases we learn that of the forty-five in which the ages were given, twenty were under the age of twenty-one.

The operation was repeated in fourteen patients, one being tapped eight times. From the careful and impartial study of the subject which the present volume gives, it may be stated that paracentesis of the pericardium is a recognized surgical procedure which one should not hesitate to adopt in positive cases of effusion where the symptoms are urgent. The fact that in most cases it is merely palliative should not prevent its employment. L.

COMMENCEMENT DAY AT THE BUFFALO MEDICAL COLLEGE.

In another column we print a report of the occurrences of February 23, when took place the closing exercises of the fortieth session of this comparatively old and famous school. So rapid have been the advances of the past ten years, that the graduate of '76 now scarcely recognizes his Alma Mater. The regular winter session has been materially lengthened, an extra spring course added, the number of teachers multiplied by three, the old building fully renovated and modernized, and the college library greatly enlarged. Outside of college walls clinical opportunities have been doubled, and now the faculty announce yet further improvements. It has been officially given out that hereafter practical work in the chemical laboratory and with the microscope will be among the requirements for graduation, and to this end the requisite facilities and teaching will be furnished. This is a most important step in advance, and, taken with the much elevated examination standards, means a great deal in testing the competency of candidates for degrees.

The faculty also announce the establishment of four new professorships, their incumbents and respective positions being as follows: Dr. H. R. Hopkins, Professor of Nervous Diseases; Dr. Bernard Bartow, Clinical Professor of Orthopædic Surgery; Dr. F. W. Hinkel, Clinical Professor of Laryngology; Dr. F. P. Vandenburgh, Adjunct Professor of Chemistry.

It will be seen that each one of these names lends a large degree of strength to the teaching corps, and the college is to be congratulated upon their acquisition. In fact in every respect the faculty have every reason to be proud of the noble work they are accomplishing.

Only one thing marred the festivities of commencement week, and that was the enforced absence of Dr. Rochester, who was not yet quite well enough to assume his accustomed post. The Alumni Association passed a graceful resolution of regret at his recent sickness, and all joined in hearty wishes for his speedy restoration to health.

* * *

CORRECTION.—We desire to correct a typographical error in the letter from our special New York correspondent in the February number, p. 201. The prescription as set up calls for six drachms each of fluid extract of quebracho and tincture of cannabis indica, when it should read *two* drachms of each, or a drachm of each to the ounce. As printed it might lead to unpleasant overdosing. The other published formula should be accredited to Dr. J. L. Smith instead of Dr. Clark.

* * *

THE death of the eminent and venerable Prof. A. C. Post, of New York, is announced. He was known among surgeons as peculiarly successful with plastic operations.

Dr. Jules Guérin, the founder of the *Gazette Mêdicale de Paris*, one of the most celebrated Parisian surgeons, has also recently died. According to the *Medical News* he was in 1837 a competitor for the *grand prix* in surgery, and presented a thesis on the deformities of the osseous system which would, with the numerous additions since made, fill some *sixteen folio volumes* of text, besides one hundred tables and four hundred plates. It is hoped that some means will be found for insuring the publication of this astonishing monument of Guérin's industry.

* * *

MESSRS. QUEEN & Co., of Philadelphia, have recently issued the most complete catalogue of ophthalmological instruments that has ever been published. It is a pleasure to find figured here all the instruments of foreign makers, and to feel that such can now be procured in this country. Everything which assists in making ophthalmoscopy and optometry easily comprehensible to the student is now easily

procurable. This firm is in position, also, to fill any prescription for glasses, no matter how complex, and have, of late, added largely to their facilities in this direction. We have no doubt that many of our readers will be glad to avail themselves of that exact practical knowledge and reliability for which this well-known house is so famous.

Correspondence.

LETTER FROM BERLIN.

Koch's and Virchow's Laboratory Courses.—Fat Embolism.

EDITOR MEDICAL PRESS:

Possibly some of your readers may be interested in a little Berlin news. The principal fashion here at present is to take a course in bacteriology with Professor Koch. If one wishes to do real work there, he takes a desk in the laboratory for six months, a year, or more, and works under the direct supervision of Koch himself and his assistants. But the fashionable courses last only one month, and into that time so much work is crowded that it is very unsatisfactory if one attempts to follow the full programme. I shall not give even an outline of the work laid out, as it consists so largely of attention to detail and has already been so ably treated in Dr. Ferdinand Hueppe's "Die Methoden der Bakterien-Forschung," of which two translations have already appeared in America.

While in the subject of pathology, and perhaps in that of diagnosis, I think we must yield the palm to the Germans, in the treatment of their cases they do not seem to keep abreast of the time. For example, in the topical treatment of both acute and chronic catarrhal laryngitis and pharyngitis the remedy which they place before all others, nay, use almost to the exclusion of all others, is nitrate of silver in solutions varying from 2 to 50 per cent. Moreover, they use the spray almost not at all—instead, make applications with a brush or small sponge. Their theory is that their application

is more exact, and touches nothing but the particular portion intended to be touched; but as a matter of fact, except in cases where some growth was to be removed or an application made to an ulcer, the forcible manner in which the brush is moved about in the larynx is in my opinion almost as injurious as the original trouble. Moreover, their results in catarrhal affections are not as good as ours.

To me the most instructive department here is that of pathology, under Virchow, in the Pathological Institute of the Charité. The material is immense; in fact, there is almost too much given in the regular course for the students.

Dr. Grawitz, Virchow's second assistant, who gives the course in pathological histology for Virchow, told me, a few days ago, that about one-third of the cases diagnosed in life as muscular rheumatism are shown, by post-mortem examination, to be trichinosis. So Bismarck apparently has not accomplished his object in excluding American pork. There is not a week passes that we cannot get at least one case in which trichinæ can be found. The thought keeps coming over me that possibly if we looked a little more carefully at home we might discover more cases of trichinosis than we do.

We had a very interesting autopsy the other day at the *Charité*. A man of about thirty-five years of age had fallen from a ladder, fracturing his pelvis and four ribs on the right side—all the fractures simple, and no piercing of the pleura. The case went on well for four or five days—no unfavorable symptoms, when suddenly he began to grow stupid, and, in less than twelve hours, died. That was the history of the case, as given us. The autopsy revealed, microscopically, no cause of death. The microscopical examination of the brain, carried on under Virchow's personal supervision, also showed no cause of death. The lungs, which, microscopically, looked as healthy as any I have ever seen, were removed entire from the thorax and taken to the class in pathological histology, where over three hundred sections were made, every one of which showed large numbers of fat globules filling the capillaries. The explanation given was that the man must have succeeded in rubbing the broken edges of the bones together to such an extent that the fat from the marrow was taken up into the circulation, and finally, coming to the minute capillaries of the lungs, could not pass

through them, thus causing fatty embolism of the lung, and so death from carbon dioxide poisoning.

This, Grawitz said, is the cause of death in most cases of death from so-called "postponed shock"; moreover, that death from this cause had occurred in cases of simple fracture of long bone, probably from too persistent efforts to obtain crepitus. The great rapidity with which the fat may be carried to the lungs has been exhibited by experiments on dogs: Break the dog's leg, rub the ends of the bone against each other, and immediately kill the dog, removing the lungs as soon as possible. On microscopical examination, the capillaries are found filled with fat globules, as in the case above recorded.

Dr. Grawitz, and Dr. Ernest Wende who is coming back to practice in Buffalo, have been making some interesting experiments on themselves as to the cause and treatment of favus, but I will not steal Dr. Wende's thunder by even hinting at what he will undoubtedly give you more in detail later.

Yours very truly,

DeLancey Rochester.

Berlin, January 1, 1886.

A NEW EMMENAGOGUE.

Editor Medical Press:

In the November number of the *American Medical Digest* is an article upon the new emmenagogue of Dr. Y. Matthews Duncan of St. Bartholomew's, London.

The emmenagogue is "erotic excitement." The editor very justly takes exception to it on moral grounds, and observes that in most cases the treatment would be worse than the disease. The effect of this treatment is, of course, sympathetic. I wish to suggest a method of obtaining the same results by sympathetic action, which is free from the objections above referred to. It is mammary irritation.

All physicians are familiar with the close sympathy between the breasts and the uterus. I will report one case, illustrating the treatment. Some years since I prescribed for Miss D——, aged 18,

fairly healthy, had never menstruated, and had been under varied domestic and professional treatment. I prescribed iron for a month and then *sinapisms to breasts* to produce marked irritation, but not to blister. The breasts became inflamed, showing enlargement, hardness and tenderness. When the inflammation subsided the menses appeared and were normal afterwards. She has since borne a family of children. Since that time I have frequently succeeded by the same treatment, but not always.

THOS. D. STRONG.

Westfield, Chaut. Co., N. Y.

Society Proceedings.

FORTIETH ANNUAL COMMENCEMENT MEDICAL DEPARTMENT, UNIVERSITY OF BUFFALO.

Reported by Gros. R. Trowbridge.

Meeting of the Alumni Association.

MORNING SESSION.

Dr. Dewey, the President of the Association, being detained at home by sickness, the Second Vice-President, Dr. D. W. Harrington, called the meeting to order at 10.30. The following were present at the calling of the roll:

'47. William Ring, James E. King.
'48. H. Hoyt, East Aurora; A. G. Elmwood, Attica; C. C. Wyckoff.
'51. E. T. Dorland, Thos. G. Strong, Westfield.
'55. M. Baker.
'56. L. T. Freeman, Smethport, Pa.
'59. W. W. Potter.
'60. C. H. Richmond, Livonia.
'61. T. M. Johnson, Wm. D. Mann, Brockport.
'62. Jas. S. Smith.
'65. Henry Lapp, Clarence; Geo. M. Eddy, Lewiston; Julius Wentz, Lancaster; D. D. Loop, North East, Pa.
'66. W. C. Phelps, F. W. Abbott, E. Diehl.
'67. E. C. W. O'Brien.
'68. L. F. Bois, Orchard Park.
'69. John H. Taylor, Holley; G. W. Pattison, M. Pickett, Corry, Pa.
'70. C. S. Pugsley, Oakfield.
'71. A. H. Briggs, D. W. Harrington, John J. Walsh, J. H. Trumbull, Hornellsville, O. C. Strong, Colden.
'72. F. E. L. Breck, Chas. B. Knowlton.
'73. F. A. Burkhart, O. C. Shaw, Kennedy.

'74. W. J. Howe, Scottsville; W. J. Packwood.
'75. W. P. Clothier, Chas. Cary.
'78. Chas. A. Ring, E. E. Storck, A. M. Barker.
'79. F. H. Bartlett, Olean.
'80. F. O. Vaughan, W. C. Barrett, S. H. Warren, B. H. Grove.
'81. Mary E. Runner.
'82. J. W. Putnam, E. H. Long, F. H. Potter, Rochester; E. W. Wollaber, Cambria; W. G. Gregory.
'83. J. F. Harris, Tonawanda; S. I. Wells, Smethport, Pa.; Julius Pohlman, Thomas M. Crowe.
'84. F. P. Vandenburgh, James S. Porter, W. G. Ring, H. H. Bingham, Lancaster; Wm. T. Taylor, R. J. Kemball.
'85. John Ketchum, Jacob Goldberg, E. L. Gager, T. F. Dwyer, S. J. Spencer, Ellicottville.

The address of welcome was delivered by Prof. Roswell Park. The Chair then appointed the following nominating committee: Drs. Gregory, Ring, Barker and Phelps, who duly reported the following ticket for the ensuing year, which was declared elected:

President—C. Diehl, Buffalo.
First Vice-President—Henry Lapp, Clarence.
Second Vice-President—D. W. Harrington.
Third Vice-President—C. S. Pugsley, Oakfield.
Fourth Vice-President—Charles A. Ring.
Fifth Vice-President—S. I. Wells, Smethport, Pa.
Secretary—John J. Walsh.
Treasurer—E. C. W. O'Brien.
Trustees—W. C. Phelps, P. W. Van Peyma, Henry Lapp, E. C. W. O'Brien, Horace Hoyt, Aurora.
Executive Committee—James W. Putnam, W. H. Thornton, W. G. Gregory, Charles Cary, *ex-officio*, Member of the Faculty; C. Diehl, President of the Association.

The report of the Executive Committee was read by Dr. Charles Ring and adopted.

The following resolutions were read and adopted:

Resolved, That the Alumni Association learns with pleasure of the continued improvement of Prof. Rochester's health, and in extending to him its sympathy trusts that he may soon be completely restored to health.

Resolved, That this Association select the medical journal known as THE MEDICAL PRESS as the official medium.

Dr. Harrington from the Chair spoke of the great desirability of a permanent prize fund in the college and raised a storm of applause by offering to begin a subscription to such a fund with $100. He then appointed Drs. Pohlman, Charles King and F. H. Potter a committee to solicit the alumni for the establishment of a fund to be given each year as a prize for the best written article on a medical subject, or in any other way, as the Association may see fit.

Dr. F. P. Vandenbergh gave notice that at the next annual meeting he should offer a resolution changing the by-laws so as to provide for a permanent secretary and recording secretary.

The death was announced of Dr. James Sloan of the class of '70, which occurred at his home in St. Paul, Minn., on February 7th. The death of Dr. Charles A. McBeth of the class of '80, which occurred on October 19th last, was also announced, and a committee on resolutions, composed of Drs. Vaughn, Walsh and Porter was appointed. They reported suitable resolutions at the afternoon session.

AFTERNOON SESSION.

Meeting was called to order by President Diehl.

The first address was delivered by Ansley Wilcox, LL.B., Professor of Medical Jurisprudence; subject, "The Legal Status of the Medical Practitioner."

Dr. Barrett, in discussing the paper, said he thought it ought to be plainly understood that a physician was not bound in any way to respond to each and every call, but that having once begun to attend a patient through a sickness, he is not at liberty to withdraw without some reasonable excuse and the providing of some capable person to take his place.

Dr. W. C. Bartlett next read an essay on "The Diseases of the Period of Dentition."

A very valuable paper on "The Relation of Sewers and Sewerage to Cities" was contributed by Col. G. E. Mann, C. E. Owing to his enforced absence, it was read by Dr. Putnam.

Each of these papers is to appear in THE MEDICAL PRESS at an early date. A vote of thanks to their respective authors was cordially passed.

COMMENCEMENT EXERCISES.

In the evening Liedertafel Hall was crowded to its utmost capacity by those attending the commencement exercises. The programme was as follows:

Music.

Prayer.
Presentation to the Chancellor of the Candidates for the Degree of Doctor of Medicine.
Administration of the Hippocratic Oath.

Music.

Conferring of Degrees.
By the Chancellor of the University.

Music.

Address to the Graduating Class.
By Pres. Charles K. Adams, LL. D., President of Cornell University.

Music.

Address to the Alumni.
Rev. Herbert G. Lord.

Benediction.

Music.

The Graduating Class, of forty-three, consisted of the following:

Henry M. Auger,
Carl William Auel,
Charles A. Boysen,
William J. Brand,
Albert E. Campbell,
John T. Carleton,
Dennis J. Constantine,
Myron L. Cooley,
John D. Davis,
Louisa Downer,
Fred. H. Ehinger,
Charles P. Eller,
William W. Hadley,
William A. Hoddick,
George G. Jones,
John J. Krim,
George W. Lane,
Walter M. Litchfield,
Burton E. Manchester,
James L. Meek,
Nicholas McCabe,
John G. Meidenbauer,
Mr. Onontiyoh,
Myron H. Parkhill,
George S. Palmer,
George H. Penrose,
Louis Pfandhoefer,
Gustav A. Pohl,
Michael Retel,
Alonso L. Richman,
Eugene H. D. Ringueberg,
Willard P. Rivenburgh,
Robert R. Seyse,
Charles B. Signer,
George E. Smith,
Charles G. Steele,
Edward T. Stevens,
Frederick A. Strassenburgh,
William Turck,
James S. Wells,
George H. Westinghouse,
Stoughton R. Wheeler,
Elmer D. Williams.

The theses of G. H. Penrose, "Indian Arrows and their Wounds," Gustav A. Pohl, "Cremation the most Rational Method of Disposing of the Dead," and E. H. D. Ringueberg, "Remnants," were declared entitled to honorable mention.

The following names were given as those composing the *honor roll*, they being the ten best students in the class as judged by their examination marks.

Messrs. Bergtold, Boysen, Meek, Westinghouse, Hoddick, Meidenbauer, Signer, Strassenburgh, Ehinger, Constantine.

After the graduading exercises the faculty, alumni, curators and guests of the evening repaired to the Tifft House, where was held the annual banquet. Nearly two hundred covers were laid, while Dr.

J. B. Andrews presided as toast-master. The toasts were as follows:

Our Alma Mater—Dr. W. W. Potter.
Our Deceased Alumni and Associates.
The Medical Profession—Dr. Simeon T. Clark.
Our Sister University—Prof. Chas. K. Adams, LL. D.
Our Faculty—Prof. Roswell Park.
The Clergy—Rev. S. R. Fuller.
The Press—Isaac Bromley, Esq.
Sanitary Medicine—Dr. A. H. Briggs.
The Graduating Class—Dr. W. M. Litchfield.

* * *

The following changes have taken place since last year: Dr. Miner's resignation as a member of the Council of the University having been accepted with regret, his place was filled by the election of Prof. M. D. Mann. Two vacancies in the Board of Curators have been filled by the appointment of Dr. G. C. Clark, of Niagara Falls, and Dr. E. C. W. O'Brien, of Buffalo.

The following new Chairs have been created and professors appointed:

Dr. H. R. Hopkins, Professor of Nervous Diseases; Dr. Bernard Bartow, Clinical Professor of Orthopædic Surgery; Dr. F. W. Hinkel, Clinical Professor of Laryngology; Dr. F. P. Vandenburgh, Adjunct Professor of Chemistry.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, February 2, 1886.

Reported by Charles G. Steele, M. D.

Dr. Charles G. Stockton in the chair. Dr. William C. Phelps read a most interesting paper on "Extirpation of the Thyroid Gland," which will appear in a future number of THE MEDICAL PRESS.

Under the head of discussion Dr. Roswell Park congratulated Dr. Phelps on the successful termination of the case. Formerly a man who undertook to remove the entire gland was considered extremely audacious. At present, however, the operation is frequently done, especially in Southern Europe, and some remarkable statistics have been reported. Antisepsis and the invention of the

haemostatic forceps have done everything to make the operation successful. Dr. Park thought the chief danger was in injuring the recurrent nerves. He had recently to operate upon two cases of enlarged thyroid gland, both of them being desperate. One was a woman who had a growth as large as a hen's egg over the thyroid cartilage. It was diagnosed as malignant and its removal was not advised. However when she began to show symptoms of suffocation Dr. Park operated, but under protest. The woman, as was expected, died during the operation. For this operation Dr. Park gave ether by the rectum for the first and also the last time. Had the patient survived the operation she would have died from colitis.

About two months ago a boy, aged six years, was brought from Tonawanda. His thyroid was found to be very much enlarged, and the history was that no swelling had been visible twelve days before. His breathing was loud and stertorous and the trachea was evidently much pressed upon. It was diagnosed as an acute enlargement of the gland, and was removed in the afternoon by Dr. Park. The boy was too much exhausted to survive, and died the following morning.

Dr. F. W. Bartlett corroborated all that Dr. Park had said of the first case. Only when she insisted did the doctor operate. Dr. Bartlett wanted to know whether leeches or bleeding or injecting substances into the glands would be of service in these cases.

Dr. F. H. Campbell said that Wagner had experimented on two dogs and thirteen rabbits. In eleven the entire gland had been removed and all died. In four he left about one-half the gland and they all recovered. Those which died had fits somewhat resembling epilepsy. It was supposed that death was due to some product remaining in the system which should have been excreted by the thyroid gland.

Under voluntary communications Dr. Phelps reported a case of cocaine poisoning. The patient took about a half ounce of a solution and when Dr. Phelps saw her the pupils were contracted, the mouth wide open, tongue thrust out and the fingers, legs and feet flexed. He gave a quarter of a grain of morphine and it worked like a charm.

Dr. Bartlett related the case of a Jewish lady who was quite plethoric, and who was suffering from insomnia. After trying a number of remedies he bled her to the extent of thirty ounces. Since that time she has slept soundly every night.

Book Reviews.

PRACTICAL HUMAN ANATOMY: *A Working Guide for Students of Medicine and a Ready Reference for Surgeons and Physicians.* By Faneuil D. Weisse, M. D. Containing 222 lettered plates, with 321 figures. New York: Wm. Wood & Co. 1886.

Any book which displays in its four hundred and fifty-six printed pages the amount of labor that has evidently been spent upon this is deserving of careful examination. The time, alone, consumed in its preparation must have been very great. The arrangement of the work is rather unique. After a few general instructions and remarks the male perinæum is first considered, then the female, after which follow the abdominal parietes and viscera, the lower extremity, the thoracic parietes and viscera, the back, the upper extremity, and, lastly, the head and brain.

The book is, in fact, a treatise on gross anatomy, so arranged and with concise yet complete directions so interspersed that it can be used as a dissection manual, and as such forms the most beautifully illustrated work of its kind yet issued. A few omissions deserve mention. No complete description of the bony skeleton has been attempted, by itself. The student hardly studies the dry skeleton in dissecting room, and this is pre-eminently the book for that room. The complete finer dissections of the sympathetic nerves and the lymphatic vessels are not attempted, as not coming within the scope of the work ; so also the anatomy of the eye and ear is omitted. No one will cavil concerning these omissions, we think, since their consideration belongs rather to the expert or the special student.

But we should do scant justice to the work did we fail to call attention to and commend the beauty of the plates, both regarding fidelity of drawing and happy reproduction by the photo process. Of the three hundred and twenty-one figures only twenty-eight are borrowed from other sources, the rest being from dissections by

the author. He has thus substantiated the claim made in his preface, that nature has been his text-book, while yet keeping in view a due respect for the labors of our fathers and contemporaries.

We extend our hearty congratulations to both author and publishers upon the appearance of this very handsome volume, and commend it with equal heartiness to every *student*, graduate or undergraduate, who desires the best practical manual of anatomy in any tongue.

ZIEMSSEN'S HANDBOOK OF GENERAL THERAPEUTICS. Vol. IV., pp. 494. New York: Wm. Wood & Co. 1885.

The fourth volume of this notable work is made up of two monographs, the first on "The Treatment of Disease by Climate," by Dr. Hermann Weber of London. It deals particularly with the elements or factors of climate, classification of climates, and choice of climate for treatment or prevention of disease.

Of course the subject is too vast to be condensed into moderate limits, yet we fail to find that the general consideration could have been more concise than it has been here made. For the busy man who wants a gazetteer indexed with diseases, this work would hardly be suited; but the student who desires to learn wherein reside those features which make a locality salubrious, or why a marine resort is favorable for one patient and an elevated mountain region for another, may well turn to Dr. Weber's essay. A section which nevertheless will please readers of every description is the third, devoted to a consideration of particular diseases with mention of localities to which one may profitably recommend sufferers from each. Our only fault-finding must be with the total omission of all American health resorts. This deficiency is compensated for, however, in the appearance in "Wood's Library for 1885" of Dr. Bell's able work, which has already been noticed in these pages.

The second monograph is on "General Balneo-therapeutics" by Prof. Leichtenstern. This seems in every respect complete. It opens with general physiological enquiries concerning the action of baths on body temperature, on change of tissue and excretions, on circulation and respiration, on the nervous system, the mechanical and electrical effect of baths, and on absorption in baths. The

second part is taken up with the action of water in its internal applications. In the third part mineral wells are grouped in classes and the pharmaco-dynamic actions of the groups discussed. In an appendix such matters as the peat and slime bath, the herb bath, bark, mustard, malt and bran baths, artificial mineral waters and baths, and the whey, koumiss and grape cures, are considered. Finally, in a synopsis, a list of diseases is again given with the best known balneo-therapeutics for each.

We here also miss reference to American waters, yet this deficiency can be made up by consulting Bell's work, and we regard the two as complementary to each other. We scarcely know where else the seeker might turn for the information here condensed, and we close the volume with a very high opinion of its value.

Fractures and Dislocations. By T. Pickering Pick, F. R. C. S. Pp. 524. Philadelphia: Lea Bros. & Co.

This is one of the latest and best of the additions to the Publishers' series of "Clinical Manuals," and contains quite a comprehensive treatise condensed into very small space. We have found in it nothing to which we would take exception; on the contrary, it has excited our admiration for the capability its author seems to possess of putting a large amount of information in very small space. The book, moreover, derives an added charm from the freshness of its ninety-three illustrations, most of which have been drawn especially for it from specimens in the museum of St. George's Hospital.

It is pre-eminently the treatise for the student and those for whom it was written.

Local Anaesthesia in General Medicine and Surgery. By J. Leonard Corning, M. D. pp. 103. New York: D. Appleton & Co. 1886.

While not the discoverer, nor yet the introducer of cocaine, Dr. Corning has done much for surgery in showing how its local anæsthetic effect can be prolonged by what he terms its incarceration in the tissues, a method which he had previously described in the pages of the *New York Medical Journal.* The present brochure is a more elaborate consideration of the whole matter of local anæsthesia, with a very brief historical *resumé.*

The principal interest of the work naturally centers in the author's way of so retaining the cocaine solution in the tissues that its action may be made almost purely local and sufficiently lasting to permit lengthy operative procedures. This method, in brief, consists of applying an Esmarch bandage up to the lower zone of the region intended to be anæsthetized (one of the extremities, of course), with the application of a second tourniquet above the upper zone, by which the superficial veins are made so distinct that they may be avoided. Then a ½ per cent. solution is injected in small amounts at numerous points, being introduced more and more deeply with successive punctures. The larger the amount to be introduced the weaker must be the solution. As is now well known, by this means complete local anæsthesia of large areas is practicable, with extensive operative manipulations.

The book should find its way everywhere, on its merits, and will be welcomed by a host of interested readers.

BOOKS RECEIVED.

From Appleton & Co., New York:

Local Anæsthesia: J. Leonard Corning.

Diagnosis and Treatment of Diseases of the Ear: Oren D. Pomeroy.

Electricity in Medicine: A. L. Ranney.

Methods of Bacteriological Investigation: Ferdinand Hueppe.

(Through Ulbrich & Kingsley, Buffalo.)

From Wm. Wood & Co., New York:

(J. H. Matteson, Agent, Buffalo.)

Practical Human Anatomy: Faneuil D. Weisse.

Ziemssen's Hand-Book of General Therapeutics. Vol. IV.

From Lea Bros & Co., Philadelphia:

Year Book of Treatment for 1885.

NOTICE.

In order to make The Medical Press of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

For Sale.—A Beck's popular Binocular Microscope, with or without lenses, as desired. Address "Microscope," care of The Medical Press.

For Sale.—A Physician's residence and practice in one of the best towns in Ohio. population 2000; good roads and fine country. Present owner intends to retire. Address: E. Y. King, M. D., Richwood, Union Co., Ohio.

GALVANIZED CORPSES.

The Chemist and Druggist says: "Cremation and inhumation are not the only resources of civilization in regard to corpses. M. Kergovatz, chemical engineer of Guiparas (Finisterre), has advocated in the Paris *Figaro* a galvanoplastic treatment which he declares he has proved to be practical. He rubs the body with plumbago, and then plunges it in a bath of copper, zinc, silver or gold according to the funds available, and he thus obtains a statue which cannot fail to be an accurate likeness and which, he thinks, would be in all respects superior to the ordinary representations of great men in our streets. Besides, the actual person of the dead is retained. He declares his intention of submitting his invention to the municipal council of Paris."

Burying, he says, has been condemned by experience; cremation destroys all evidence of crime in cases of murder, and embalming is expensive.—*Druggist's Circular.*

COCAINE IN OLIVE OIL.

A New York physician highly recommends a solution of the free alkaloid cocaine in olive oil for the relief of neuralgia, toothache and kindred affections. The solution, two or four per cent., is readily effected by the aid of a gentle heat. According to Prof. Bignon's views, the free alkaloid cocaine is much more active than any of its salts. As cocaine seems to dissolve in olive oil without the formation of an oleate, as would be the case with oleic acid, this olive oil solution promises to afford a most desirable method of applying cocaine locally, particularly in the mouth, where oil has the advantage of not mixing readily with the saliva. We have seen a case of toothache and neuralgia completely relieved after the application to the gums of a two per cent. solution of the free alkaloid in olive oil, and were inclined to attribute the relief largely, if not wholly, to the cocaine thus applied. The solution is apt to grow turbid with the separation of alkaloid if allowed to stand in the cold.—*Chemical Gazette.*

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The Medical Press
of Western New York.

Vol. I. APRIL, 1886. No. 6.

CREMATION.

By Charles Cary, M. D.,
Prof. of Anatomy, Med. Dept. Univ. of Buffalo; Attending Physician to the Buffalo General Hospital; President of the Buffalo Cremation Company.

[Read before the New York State Medical Society.]

The time has gone by when cremation was theoretically discussed as a means to be desired for disposing of our dead, and the time has already arrived when to be a cremationist does not necessitate an apology, but when hundreds of our most intelligent people have committed themselves in favor of this great sanitary reform, are spreading their belief broadcast, and are daily numbering new disciples; until now the number of those who thoroughly believe that cremation is a need to the living, and is also the truly pure method of treating the dead, has reached very large proportions.

In regard to a subject of this character, the laity naturally look to the medical profession for guidance and information, and it seems to me eminently proper that a theme which is receiving so much attention at the hands of the people generally should be brought formally to the notice of the Medical Society of the State. The time is also, probably, not far distant when legislation in regard to cremation will be needed, and we must be prepared to give such counsel as will protect the people not only against cremation but also against the careless and unsanitary methods which are sometimes practiced in relation to inhumation. It is not practicable in the time allowed me, to touch upon all the points bearing upon this subject, and I shall refrain as far as possible from presenting the regular arguments in its

favor, for they can be obtained in book form prepared by far more able writers than myself.

Cremation was primarily advocated as a sanitary necessity, and, in advocacy of this view, were cited innumerable instances of sickness and death, caused by the present method of inhumation. These arguments I cannot adduce at this time, as they are made up of descriptions of churchyard and graveyard abuses, of the cases of stream and well poisoning, and even of sudden death caused by cadaveric emanations; also, cases of living burial, etc.; and I am sure that a recital of these attested cases is not necessary to convince us of what we already know, viz., that water *can* be poisoned and air polluted by the dead, and that disease *has* frequently resulted from disturbing the ground where epidemical disease has been interred. No one can, with honesty, dispute these facts. If any one does, I refer them to Edwin Chadwick's report, a parliamentary paper, or to Stephen Wicks' "Sepulture."

I desire to state, at the outstart, that in my opinion there is an absolute demand for cremation in all quarters of the globe, but, be it understood, the imperativeness of such demand is much greater in those thickly populated sections of the world where the dead are actually crowding out the living; and a glance at the history of cremation shows, as plainly as facts can demonstrate, that the reform is progressive, and was first instituted where most needed, and has rapidly spread from that point of development to all quarters of the civilized world; and, like all reforms, it will grow, until earth burial shall have become almost abrogated.

It is unquestionably less in demand at the present time in this country than in Europe. Our country is broad; our cities are all young; our cemeteries are new; we have not reached in them a soil saturation. In fact, unless we except New Orleans and perhaps New York, no very great mortality can be attributed directly to our cemeteries; but the sanitary commission on the epidemic yellow fever of 1853, in New Orleans, shows that in the 4th district, where there were three extensive burying-grounds, the mortality was 452 per 1,000, which was more than double that of any other district in the city; and in certain localities in this State where the people are crowded together, we will soon be in a condition where the change

must be made, and it is the duty of the medical profession to prepare the minds of the people for cremation, especially the cremation of those who have died of epidemic disease.

We must, therefore, inform ourselves of the results of investigation into the condition of European graveyards, and learn of the terrible mortality which inhumation has caused, and certainly not wait till the lesson is taught us by bitter experience, through the teachings of sickness and death, but profit by the developments of our older sister nations, for it is certain that such a radical change which is so closely interwoven with sentiment and long education, cannot be accomplished in a day.

Let us for a moment glance at the development of modern cremation, which in practice is really younger than the youngest present, and notice how healthy and rapid has been its growth. The first society founded for the promotion of cremation in Europe, was in England in 1874. Prior to that time, protests had been made in Italy, Germany and France against intramural burial; commissions had been appointed to report such evils as might exist, and of the material of these reports cremation has been the outgrowth.

The greatest activity has been manifested in Italy, where furnaces are now in active operation in the following cities: Milan, Lodi, Cremona, Udine, Rome, Varese, Florence, Navara, Corno, Pisa, Padua, Brescia, and Leghorn. There is also no question but that Italy was sadly in need of cremation, for the conditions are such that strangers to-day who enter her territory do so at risk of life on account of the infectious fevers which are ascribed to soil emanations, due to its saturation with animal decomposition. Perchance some of the gentlemen present have visited certain of her churches and have been actually driven out by the foul odors, which are terrible under certain atmospheric conditions.

The arguments that have established cremation in Italy are indeed strong, for they had to overcome the laws of the land, the rules of the church, and break down the ceremonies of Catholicism which are so interwoven with superstition.

The cry which first went up from England, Germany and Italy was echoed from all quarters of civilization, Austria, France,

Belgium, Switzerland, Spain, Holland, Sweden, Norway, Denmark, South America, Mexico and the United States, all have shared in the general discussion of a revolution of custom, and in all but one of these countries I find that numerous societies have been formed, numbering tens of thousands of members, while in some countries crematories have already been erected.

Conspicuous among those who are the most earnest advocates of cremation, are, first, physicians and men of science; then come the clergy, next in order in their numerical proportion; then follow men in all callings of life, but, as a class, they are certainly thinking men. Another noticeable feature, among the advocates of cremation, is the age of those who adopt the measure; they are, with a generous number of exceptions, young men. A man who has reached the age of fifty, who has for long years prepared his mind to look upon the comfortless cemetery as the final resting-place of his mortal remains, cannot bring himself to a change of thought at that late day, and he desires to follow in the path trodden by his forefathers; but before this present generation shall have passed away, there is every promise, nay, the promise is already fulfilled, of the firm and permanent establishment of the custom.

The literature upon the subject is the development of a few years. Between 1539 and 1843, only fifty-nine publications of any character had been issued, in divers countries; but from 1843 to 1884, five hundred and six works or articles were published upon the same subject, and hundreds of speeches and unpublished articles were also written.

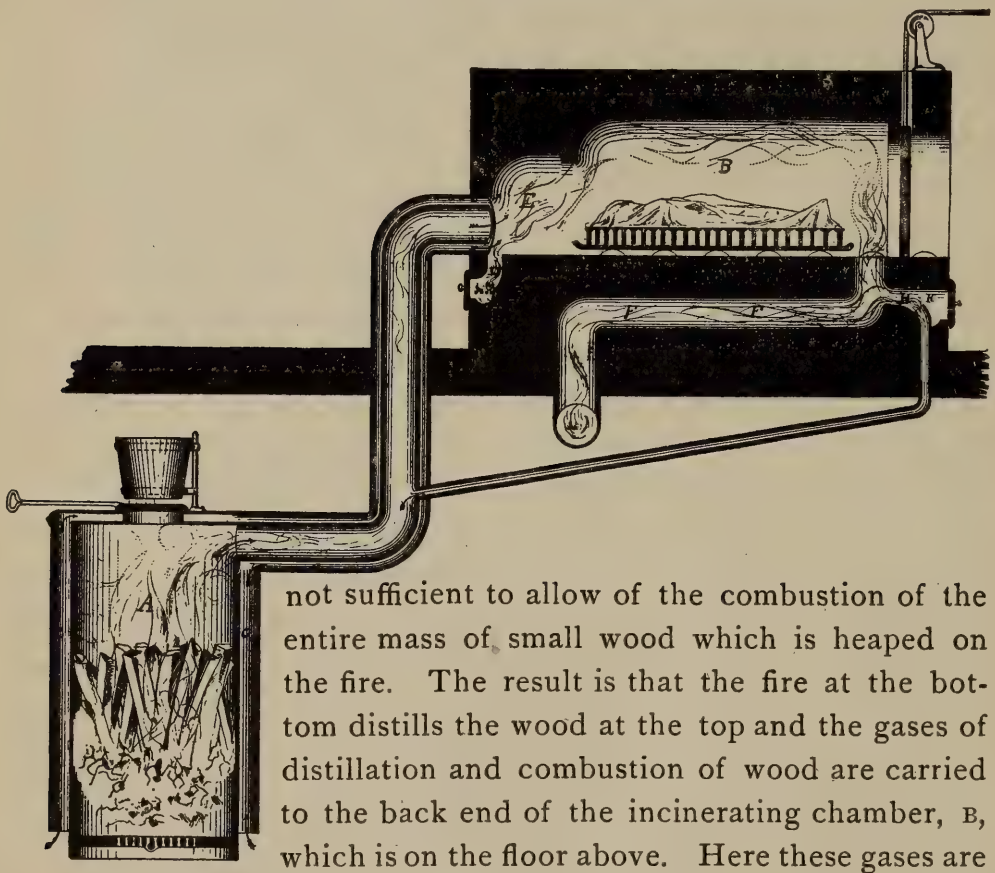
It was in Germany that the first authorized incineration of a human body took place in Europe. This occurred not twelve years ago, in October, 1874. In Milan, on the 22d day of January, 1876, the first incineration took place in Italy. In England, the agitation of cremation, by Sir Thomas Brown, was begun in 1853, but owing to the notorious conservativeness of its people, it was not until March, 1885, that the first cremation was performed in that country.

In all, there have been some two hundred and fifty in Germany, four or five hundred in Italy, and about one hundred in this country who have undergone the depurating power of fire. Cremation,

then, can be considered as fairly established, and it remains for the near future to complete its growth. The furnaces in this country are the Le Moyne furnace at Washington, Penn., which was finished and operated in 1876; and the Lancaster, Pittsburgh, New York and Buffalo furnaces built since that time. Others will soon be completed in Baltimore, New Orleans, Worcester and Chicago. Of these various furnaces I shall make no comment; they are all constructed upon different plans, and they all have for their object the resolution of the body into its elements in a rapid and decent manner, without offense to the living or a want of respect to the dead. I am personally so strongly impressed with the purity, and the arguments in favor of cremation that I can with difficulty conceive how others can withstand their force. I have never allowed myself to do so, but the desire is always strong to suggest cremation wherever death has occurred from zymotic disease in any family coming under my care or personal influence. How a disease so feared and dreaded that a patient suffering from it must be cut off from any communication with the remaining members of the household, a disease which finally cuts off the life of the victim attacked in his full vigor or in childhood, how this disease, I say, can be allowed to remain in that cherished body, to give rise to the same malady at any future time to those who may desire to tenderly care for him after his death, is to me more than surprising. I should desire, nay, insist that the body of any one dear to me, should be cleansed from this dreaded malady and restored to me in such form that I no longer feared its contact, and then with a feeling that the one I had loved was no longer a thing of dread, I should place the depurated remains where they might be as harmless to others as they are pure in themselves. The main object of this paper is to present cremation in such a form that it may be fully and scientifically grasped by my hearers; so let me briefly describe the process as it is conducted in Buffalo, and to make it more graphic I will describe the incineration which was performed on the 27th day of December last, when full observations were made. I shall render this description without any embellishment, and I challenge any opponent to give as graphic a description of the terrible night of the grave where they can see and follow the

horrible process of decomposition. Preparatory to the description a glance at the furnace will aid our understanding.*

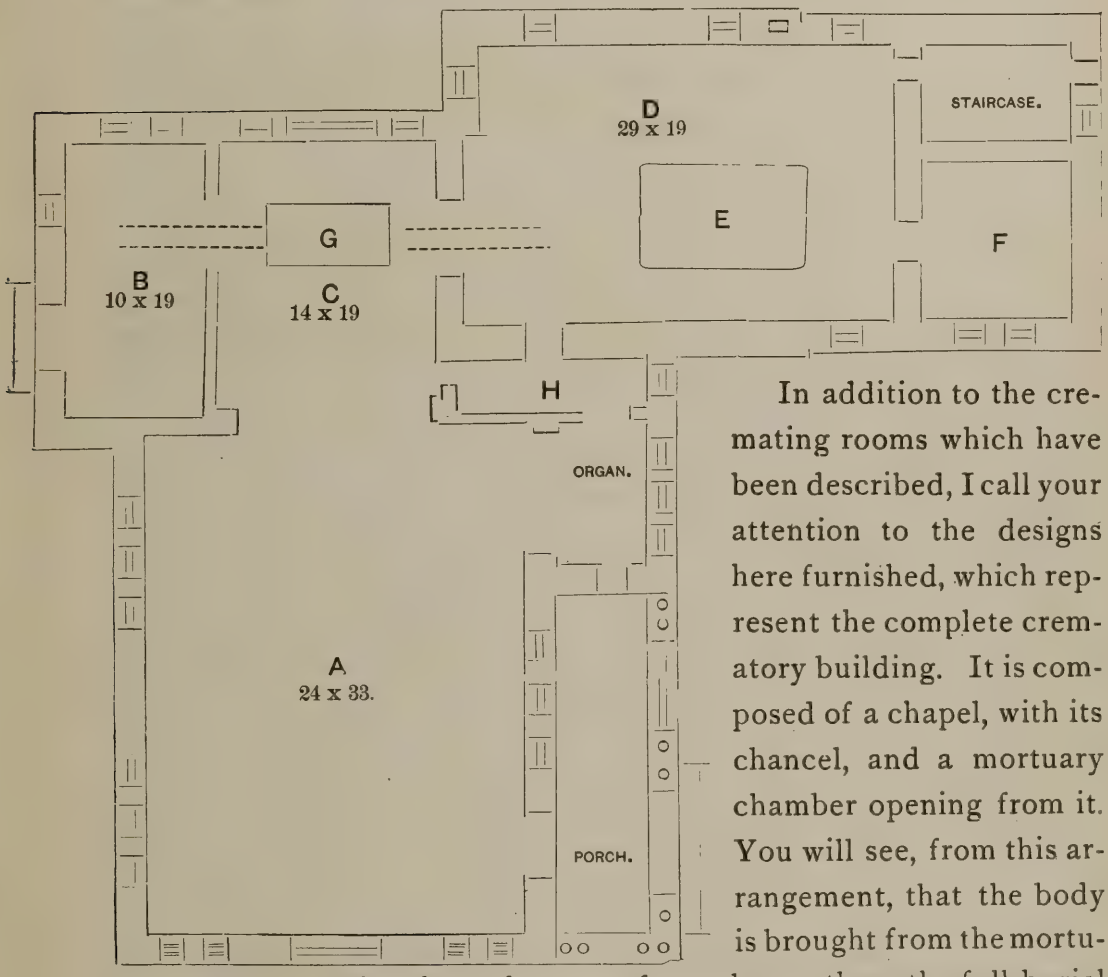
In the basement is a gas generator, A, which is a simple fire-pot about four feet in a vertical measurement and two laterally. The air for combustion is admitted through a grate in the bottom and is



not sufficient to allow of the combustion of the entire mass of small wood which is heaped on the fire. The result is that the fire at the bottom distills the wood at the top and the gases of distillation and combustion of wood are carried to the back end of the incinerating chamber, B, which is on the floor above. Here these gases are met by air heated in a chamber, C, outside of the furnace, where the two are ignited by a fire, D, which is kept burning just under their point of union. The Bunsen flame, E, thus produced, is thrown quite across the incinerating chamber; from thence it is carried back beneath the retort by the flue, F, into the basement, to a chimney which is about forty feet high, and so to the open air. A certain amount of gas is also burned in the flue, F, beneath the incinerating retort, and also at the bottom of the chimney. It will be seen from this description that the Bunsen burners play directly upon the subject,

* It should be stated that this diagram is in some sense schematic; nevertheless, it shows perfectly the general principles upon which the Vanini furnaces are constructed.

and by their heat liberate the gases of the body, which gases, being burned in the retort, are carried into the flue beneath; here another Bunsen flame, H, ignites such combustible material as has not been consumed in the retort, and at the foot of the chimney the third Bunsen burner, which is not represented in the drawing, finishes the combustion.



In addition to the cremating rooms which have been described, I call your attention to the designs here furnished, which represent the complete crematory building. It is composed of a chapel, with its chancel, and a mortuary chamber opening from it. You will see, from this arrangement, that the body is brought from the mortuary chamber to the chancel upon a funeral car; there the full burial service is conducted. At a proper moment in the service the car is noiselessly moved from the chancel to the incinerating apparatus. Here it is hidden from the view of all who have attended the funeral services, and is introduced into the furnace. The introduction of the body, like the committal, would be most harrowing to the friends who are present, and the plan here shown is intended to relieve the mourners of that painful vision. We do in life many things which are recognized by all as necessities, and yet which are

not intended to be beheld by others. And after death many offices are performed for us, which, in like manner, would be horrifying to witness. Why, then, is it necessary to force the burning of the body upon the view of the friends who have gathered in mourning? Should any one, however, wish to witness it, there is ample room for the accommodation of many.

But to continue with the description of the incineration. At 9 o'clock the fires were lighted in the rear of the furnance; at 9.31 the fire was lighted in the gas generator; at about 9.45 three flaming jets were being thrown into the retort, each jet being nine inches in diameter. The jets extended well across the chamber, and all was in readiness for the cadaver, which was introduced sixteen minutes later. It took, therefore, one hour from the lighting of the first fire to reach the necessary heat for cremation. The body was covered with a sheet wet with a solution of alum, the object being to protect the body and prevent the development of gases until the door is closed, as well as to hide from view its contact with the flames. The evaporation of the water on the sheet filled the chamber with a haze, which was mysterious and beautiful, and then the door was noiselessly closed. At once the body began to vaporize and the vapors to ignite in every part of the furnace, so that nothing was visible through the small aperture in door except a bright crimson hue. These crimson vapors were opaque, on account of the steam, and though the body was not eighteen inches from the eye of the observer, it was not visible. For the next half hour the combustion was most intense, and the temperature of the retort must have reached its highest point. At this stage of the process, a white vapor was seen pouring from the mouth of the chimney. It lasted but a few minutes, perhaps ten, and then ceased. While it was being emitted an examination showed it to be purely the vapor of water—steam, free from smoky or cadaveric element. It was induced partly by the moisture of the walls, but largely from the watery parts of the subject. At 10:55 the opacity of the crimson was seen to diminish gradually and the ashes of the lower extremities could be easily discerned as they had fallen down upon the basement slab. In looking in at the other end of the retort, the thorax and abdomen were not in view, but the skull could be plainly seen still upon the terra-cotta columns, but

ready to crumble. At 11.05 little or no flame could be seen. Most of the bones had fallen on the slab, and owing to their white heat, looked like pieces of bismuth. At 11.22, one hour and six minutes after the introduction, the cremation was accomplished. At 11.28 the remains were removed and inspected. As they were brought out, there was no smouldering of ashes, and owing to their porous state, the bones cooled very rapidly. They were, for the most part, snowy white, and contrasted with the glowing red platform on which they rested. Others were darker, and again some were of a metallic red, due to the presence of iron. The original weight of the body was ninety-eight pounds; the calcined remains weighed five pounds and seven ounces.

Now the purifying effects of the fire were made manifest. There were some fifteen of the laity gathered in the chapel to witness the process, and all showed the usual horror caused by the presence of the dead, but as soon as the body was withdrawn from the retort every one approached the terra cotta slab upon which the ashes rested and were filled with wonder at the purity and beauty of those calcined remains. I say it was a most wonderful change, when the human body caused horror and disgust, to see in one short hour the same body so purified and reduced that in lieu of being a loathsome thing it became really an object of beauty and wonderment.

I shall not enlarge upon this thought, but if any one questions the purity argument of cremation they have but to witness a change such as this to have it so forcibly impressed upon them as to outweigh any other which can with justice be brought against it. To ascertain the degree of heat which the retort attained the following method was resorted to, which may be of interest to some present. Upon a piece of fire-brick bits of the following metals were placed, which have their point of fusion and boiling as given below: Zinc fuses at 412 Centigrade; aluminium at 600 C.; calcium chloride, dry, 719 C.; cadmium boils at 772 C.; silver fuses at 960 C. and copper at 1,100 C. The zinc had volatilized, the aluminium and the calcium chloride had fused, the cadmium had volatilized, the silver, which was a silver dollar, had so softened that it had taken the shape of the uneven piece of brick upon which it rested; the copper, of course, had remained unchanged. We must therefore have attained a heat

approaching the fusion of silver, which is 960 C. or 1748 F. It may be urged that a change so rapid as the one described, which destroys every feature, every outline of a dear friend, a loving wife or child, would be harsh and cruel, for though being dead we still regard the remains as the embodiment of the departed. But in the language of J. D. Bugles, I would say that there is no option, the change must come, and we may but choose the method. No device of man can avert the final destiny. Ashes to ashes it must and will be. The eviscerated and embalmed bodies of the Pharaohs and their descendants, preserved these thousands of years with almost unspeakable care, which are now being sent by shiploads from Egypt to England to be ground up and converted into fertilizers, furnish examples of the oxidation long delayed but not finally defeated.

ON THE PRACTICAL USE OF LANOLIN.

BY PROF. DR. OSCAR LIEBREICH.
Professor of Pharmacology in the University of Berlin, Germany.

Translated for the Medical Press, with the author's permission, by Ernest Wende, M. D.

From my investigations into the composition of cholesterin fats found in keratinous tissues, I conjectured that their absorption into the skin would be the best in the case of those fats which have their origin in keratin-bearing substances, as hair, epidermis, etc. The old theory that the skin was only oiled from grandular secretion, did not harmonize with my researches.

Upon my suggestion, lanolin is now being tested as to its efficacy in therapeutics as a new basis for ointments. It possesses such peculiar properities, not to be found in the ordinary fats, oils and vaseline,—also noticed by Berthelot,—that it becomes a matter of necessity to give a number of formulæ in order that the druggist may more easily compound and dispense the vehicle. It is also of importance to add other ingredients to make it more pliant, it being a too sticky mass in itself to be employed alone.

From the numerous trials which I made with different substances, as vaseline, ungt. parafini, glycerine oils and fat, for this

purpose, I found the last-named article by far the best, as the others generally interfered with the absorbing qualities of lanolin. I must also state that the many substances under the title of pure wool fat, wool oil, and wool fat which have found their way into the trade, before and since the introduction of lanolin, are injurious, for they contain free acids and various animal substances.

I will not fail in the near future to publish its more exact chemical composition, but for the present, I may give the following tests for its purity in therapeutics:

1st. A small portion on being heated in water over a water-bath must show the absence of glycerine.

2d. If a solution of caustic soda be added, ammonia must not be developed.

3d. The fat, if a small quantity has been heated with water on a water-bath, must separate in oily drops without forming an emulsion; if the quantity employed be large, it must separate in a clear oil.

4th. With blue litmus paper, the reaction must not be acid.

5th. For examination, if lanolin be mixed or well rubbed with water upon a ground glass plate with an iron spatula, the result must be a product containing over 100 % of water, and if the lanolin employed be pure, the kneaded mass will be sticky and paste-like, to which the spatula readily adheres; but if impure, the mass will have a soap-like smoothness, from which the spatula readily glides.

6th. Lanolin and all lanolin salves and ointments, on exposure, show a darkening of their upper surface, due to the evaporation of water, and not to their decomposition.

7th. It never becomes rancid, and its smell should remind one of wool.

Although my experience with the remedy, with that of other physicians, has been limited, yet I do not hesitate to pronounce the results thus far obtained as most promising.

The first question which presented itself was whether the skin would bear it well. From its use in over 400 cases in the clinic and private practice of Dr. Lassar, the dermatologist, no irritation of the skin was ever produced—a result which my own experience during the years which I have been experimenting with it confirms. For

this reason alone it is to be highly recommended for massage, for which purpose I should suggest recipe No. 12. It is true it is not as smooth as vaseline, but it has the advantage that the skin, after being rubbed dry with a cloth, still remains soft and pliable.

In cases where the epidermis is fissured, as for instance in chapped hands, we may again advantageously employ recipe No. 12. The parts affected, particularly the hands, are to be well washed with some good soap and then to be thoroughly rinsed with water. Upon the moist surface, a small quantity of the ointment is to be well rubbed in, and the parts afterwards to be wiped with a dry towel. The skin is left soft and supple on account of the rapid absorption and retention of the lanolin. Accordingly, it may be especially desired for the hands of surgeons and obstetricians. Hands thus treated also show a greater resistance towards cold and water.

The influence which lanolin produces upon the skin in seborrhœa sicca is remarkable. On combing the hair with a fine comb, the scales disappear rapidly. For this purpose, I should employ prescription No. 21, which may be somewhat changed according to the taste of the individual. In pruritus ani I have used lanolin with sulphur with excellent results.

Dr. Lassar, in his polyclinic for skin disease, has found that psoriasis heals very easily and quickly and without irritation through the use of a 25 % lanolin-chrysarobin ointment. It remains for the future to determine whether in all cases equally favorable results will be obtained.

In connection with the lanolin-chrysarobin treatment, I had the opportunity of seeing an interesting and remarkable result obtained by Dr. Wende, of Buffalo, N. Y. The patient, a boy of thirteen years, from the polyclinic of Dr. G. Behrend, had tinea favosa over the greater part of his head. The case was of eight years' standing, and had resisted the most careful and thorough treatment. It was shown that the case was undoubtedly favus, by Dr. Grawitz, assistant of Prof. Virchow, who made a pure culture and inoculated it on the left arm of Dr. Wende, where the most characteristic scutulas formed. At first only one-half of the head was treated in this manner. After a few applications it showed marked improvement, and the

advance was so rapid that after a few days it was decided to treat the remaining half in a similar way. In twelve days the case was apparently cured, and treatment was, for the present, discontinued.

The favus on the arm of Dr. Wende disappeared upon one application of a ten per cent. and one of a twenty per cent. lanolin-chrysarobin ointment.

Dr. Wende further informs me that a ten per cent. lanolin-chrysarobin ointment produced a radical cure in herpes tonsurans and in pityriasis versicolor.

Such fine results further illustrate how great a benefit was conferred by Squire upon the medical profession through the introduction of chrysarobin.

Dr. Lassar employs salicylic-lanolin ointments in the treatment of eczema. This may answer well in many cases, but inasmuch as water is not always tolerated in eczema (lanolin contains twenty to twenty-five per cent. of water), Dr. Wende recommended No. 3, the water to be expelled before using.

Lanolin is excellently adapted to form the basis for blue ointment. The mercury is found more minutely divided than I have ever before witnessed. Upon my request my friend Geheimrath Mayer, of Aix-la-Chapelle, in connection with Geheimrath Brandis, made a thorough test of it. They consider it superior to all other vehicles for this purpose. In no case did it show a tendency to produce eczema.

As can be seen from the recipes, no fat is required in compounding a salve where fluid extracts are required; but I must especially warn against employing the full dose of toxic agents, as only one-half the amount will be necessary; thus a veratria salve, consisting of fat 10.00 grams, veratria 0.25 grams, produced no irritation on the skin; while a salve of lanolin 10.00 grams, veratria 0.25 grams, was so strong that for five hours an intense burning sensation was experienced on and about the point of application.

I annex the following list of recipes for the use of physicians. They may be somewhat changed if necessary:

No. 1.
Argenti nitratis..... 1.00
Lanolini..... 9.00
This ointment is quite solid, good to spread on charpie.

No. 2.
Cerussae..... 30.00
Adipis..... 10.00
Lanolini..... 60.00

No. 3.
Empl. plumbi spl..... 50.00
Ol. olivae..... 20.00
Lanolini..... 30.00
This salve appears solid, but becomes pliant as soon as brought in contact with the skin.

No. 4.
Empt. plumbi spl.
Lanolini āā.
To be spread on cloth and to be used as a plaster.

No. 5.
Hydrarg. praecip. albi..... 10.00
Adipis..... 10.00
Lanolini..... 80.00

No. 6.
Hydrarg. oxid..... 10.00
Lanolini..... 90.00

No. 7.
Lig. plumbi subacet..... 8.00
Adipis..... 10.00
Lanolini..... 82.00

No. 8.
Zinci oxid..... 10.00
Adipis..... 10.00
Lanolini..... 80.00

No. 9.
Cinabar..... 10.00
Adipis..... 10.00
Lanolini..... 80.00

No. 10.
Hydrarg..... 50.00
Lanolini..... 12.50
Ungt. Hydrarg. ciner..... 2.00
Sebi..... 25.00
Lanolini..... 87.50

No. 11.
Potassii iodidi..... 20.00
Aquae..... 10.00
Adipis..... 20.00
Lanolini.....150.00

No. 12.
Cetacii..... 10.00
Ol. olivae..... 30.00
Lanolini..... 40.00
Aq. rosae..... 50.00

No. 13.
Iodoform..... 10.00
Adipis..... 10.00
Lanolini..... 80.00

No. 14.
Chrysarobin..... 10.00
Adipis..... 10.00
Lanolini..... 80.00

No. 15.
Picis liquidæ..... 20.00
Lanolini..... 80.00

No. 16.
Balsam. Peruvian..... 10.00
Ol. terebinth..... 20.00
Lanolini..... 70.00

No. 17.
Acidi boraci..... 10.00
Adipis..... 20.00
Lanolini..... 70.00

No. 18.
Acid. carbol..... 5.00
Adipis..... 5.00
Lanolini..... 90.00

No. 19.
Acid. salicyl..... 10.00
Adipis..... 20.00
Lanolini..... 70.00

No. 20.
Naphtol..... 5.00
Adipis..... 10.00
Lanolini..... 85.00

No. 21.
Lanolini.
Butyr. cacao, āā..... 50.00
Adipis suiti..... 5.00
Ol. Ros. gtt. iii.
A hair pomade.

Berlin, Feb. 5, 1886.

ON THE SEWERS AND SEWAGE OF CITIES.

BY GEO. E. MANN, C. E,
Buffalo, N. Y.

[Read before the Alumni Association, Medical Dept. Univ. of Buffalo, Feb'y 23, 1886.]

The few remarks I desire to offer here this afternoon upon the subject of sewers and sewage have been suggested as a fit and interesting subject for consideration at this time.

The advancement in sanitary science, especially in this country, during the past decade, has done much in the way of causing cities and even villages to establish systems for their sewers, based upon a scientific investigation of the subject, showing the immediate

necessity for radical changes in the old, and liberal additions to the new.

It has been demonstrated from the results gained by experience in the working of sewers, that by so proportioning the size, form and inclination of a sewer to the volume of sewage it has to convey, it may be made self-cleansing. The conditions which govern their size at any one point are, simply—the amount of sewage proper passing at that point and the amount of probable rain governing that locality.

Experiments made in London show the sewage proper there to be five cubic feet per head per diem in the poorer districts, and eight cubic feet per head per diem in the wealthier ones. Mr. Fanning, hydraulic engineer, gives the average daily supply of water to London as twenty-nine gallons per capita, and to New York, Brooklyn and other large American cities as fifty-eight gallons per capita for 1874, and now increased to about seventy-five gallons.

It follows that if the sewage of a city is regulated by its water supply, as it undoubtedly is, it becomes a material element for the consideration of the sanitary engineer in perfecting the plans of a system.

The ancient cities of Alexandria, Carthage, Nineva, Jerusalem, Rome, and many others of historic fame, possessed systems of sewers and water supply, the completeness of which far exceeded the most elaborate structures of modern times. Their aqueducts still bear witness to their engineering skill. The vast and gloomy Cloaca in Rome was constructed twenty-five centuries ago. It was built more as a drain than a sewer, to drain the water from round about the Forum, and, therefore, was not impervious. This oldest known sewer or drain still performs for the capital of United Italy the same service that it rendered to ancient Rome.

Following that period of scientific culture, came the long, dark interval of centuries, when the nations seemed to have lapsed into ignorance of, or indifference to, the requirements of sanitary laws; and not until the "black death," and the "plague" gave them fearful warning did Western Europe pay heed to precautionary measures for the preservation of public health.

London established a system of sewers in 1856, in 1849 and

1854 they having experienced cholera epidemics. The system consists of five sets of intercepting sewers, with four pumping stations, discharging the sewage into the Thames River. Liverpool has no difficulty with sewerage, the land being high and covering an area of a little over 5,000 acres. Buffalo has an area of over 25,000 acres. Liverpool discharges sewage into the Mersey River at deep water. Reservoirs are used for flushing purposes, and the sewers ventilated by house pipes. The city of Leeds (about 300,000 inhabitants) purify their sewage before discharging it into the River Aire. The cost of building their "precipitating works" amounted to $450,000, and the annual expense for operating them is $75,000. Birmingham also depends upon precipitation to clarify their sewage, at an annual cost of $65,000. Edinburgh formerly discharged its sewage into the River Leith, but now has an intercepting sewer.

In Boston, Washington, St. Louis, and many other large American cities, they originally adopted many of their natural water-courses wherein to construct their large receiving sewers. After a term of years these water-courses have become filled up, and their track almost if not quite obliterated, and with the erection of houses directly over the sewers, it has made it exceedingly difficult of access to them for repairs. The greater objection, however, is, in case of accident, the contamination of the air in the houses thus located, and in case of very heavy rains the almost certain overflow.

Chicago drains its sewage into the Chicago River, thence to the Illinois River by canal. Like the old Hamburg of Buffalo, these waters rarely freeze. The question of Chicago drainage and sewage, "What shall be done with it?" is about to be submitted to a commission to determine. Buffalo, by the construction of a large intercepting sewer, has remedied to a large degree the nuisance before existing by our sewers discharging into the Hamburg canal.

In connection with the larger sewers of cities which underlie the streets, and in some cases along water courses, and which form the elements of a system, as the main trunk lines, the branch lines for districts, the local street lines, etc., let us consider the house drains and plumbing. The house drains are a small system of sewers within the dwellings for the purpose of conveying to the street sewers all liquid refuse, waste water and excreta. Why these should

be called drains, while the conduits that perform the same service for the city are called sewers, I know not. The inconsistency of the term, however, is obvious, for, in strictly technical terms, drains are the channels that remove surface and sub-soil waters only. The term commonly applied to the pipe that collects the refuse water from a house is a "drain pipe;" that which discharges from the closet into the drain pipe is called the "soil pipe," and the smaller tubes from bowls, wash-tubs, etc., "waste pipes."

The indifference with which house owners or occupants look upon this question of house drainage is such as to excite wonder and surprise in the minds of those who have interested themselves even but a little. Marble-top wash-stands, silver-plated fittings, decorated china basins, bath-tubs set in elegant cabinet work, the plumbing work which is in sight, of the brightest plate, satisfy the minds and tastes of most house dwellers. On the parts behind these casements, where are so often found the defective trap, an imperfect joint, the work of gases on the inner sides or soil pipes and lack of ventilation, the housekeeper rarely spends a thought. The portions of the pipes which are built into the walls out of reach and out of sight, are the parts (in the main) which should be exposed and ornamented.

As for the composition of any definite sewer gas, the only available analysis is that made by the Sewer Department of Paris of the gas which bubbles up to the surface from the sewer beds at the bottom of the River Seine, and which is probably not unlike what was to be found in summer in the Hamburg canal in this city.

The analysis gave, as a result, in parts of 100:

Carburated hydrogen	72.88
Sulphurated hydrogen	6.70
Carbonic acid	12.30
Carbonic oxide	2.54
Other substances	5.68
	100.00

It is no longer a matter of doubt that the emanations from sewage favor the development of many forms of diseases. The lowered rates of mortality in towns where sanitary improvements have been effected indicate it beyond peradventure. An investigation

into the causes and conditions of yellow fever in the United States, with the help of the library of the Surgeon-General at Washington, concludes that nothing is so important in the prevention of yellow fever as proper water supply and sewerage. An epidemic of scarlatina in Baltimore was traced, by Dr. Morris, to the effluvia of drains impregnated with the refuse of slaughter-houses. New York has had several epidemics traceable to defective sewerage. The question arises, Does sewage gas produce these diseases, or does it establish a condition that favors their development? In either case our sewers, drain-pipes, plumbing, etc., should be constructed in as perfect a manner as science and means can command. A constant watch should be kept on the house system, lest by the settlement of casements, walls or partitions, ruptures should occur in the pipes; also, to know when old should be replaced by new; and to know absolutely that a poison is not being brought into the house, bringing with it suffering, permanent ailments, or death itself.

CONTAGIOUS INFECTION IN SURGERY.

At the present day when the medico-chirurgical mind of any training whatsoever admits without gainsaying the value and importance of cleanliness in all surgical manipulation, it is imperative that we inform ourselves just what measures are needed to insure immunity from contagion by the ministering hand and instruments.

The favorable results attained in operative surgery subsequent to the employment of the several disinfectants, of greater or lesser concentration and power, and of late years even without any such, led Kuemmel, of Hamburg, to enter upon a study of the precautions that must be observed. He presented his results to the Fourteenth Congress of German Surgeons in April, 1885.

The questions that presented themselves to Kuemmel were:

1. Is it at all necessary to employ the more or less toxic antiseptics in order to achieve a complete disinfection?

2. Are the antiseptics in themselves the active factors in surgical success?

3. Have we an antiseptic whose action is really prompt and positive?

4. What role does the atmosphere play in the infection of wounds?

These and similar problems Kuemmel endeavored to solve by experimental study.

According to the reporter, two modes exist by which a wound may be endangered; either through direct contact of the wound with infected hands, instruments, sponges, etc., or through the immediate agency of the air.

Let us to-day consider the infection by direct contact.

The author, in his research, aimed to preserve the conditions that really obtain in practical surgery. He, therefore, did not determine the relation of the several disinfectants to the pure cultivations of the whole known series of micro-organisms, but confines himself to those organisms that the practitioner runs across each day, such as the microbes of putrefaction, of phlegmonous processes, of diphtheria, etc.

His investigations were so conducted that the objects to be examined, the hands, instruments, sponges, shreds of tissue and fluids from the wounds, were brought into contact with the nutritive soil employed by Koch.

The antiseptic, or the mode of disinfection used upon these objects, was only then considered a perfect success if no development of any organisms, indifferent or pathogenic, took place.

It was found that highly polished, new instruments were not disinfected by an immersion for two minutes in a five per cent. solution of carbolic acid. An exposure for ten minutes to a five or a three per cent. solution was found to suffice for the prevention of any development in the nutritive media.

Submersion for even fifteen minutes in a sublimate solution, 1:1000, did not disinfect; neither exposure to peroxide of hydrogen, turpentine or ol. sinapis, 1:500.

Instruments that had already been used, although carefully cleansed in accordance with the usual method, demanded a longer period of exposure. Instruments that had been used in autopsies were not clean after fifteen minutes dipping in five per cent. carbolic solution or 1:1000 sublimate solution.

At any rate, abundant proliferation of bacteria ensued along the line of incision or scratching on the gelatine cake.

Kuemmel has found, as others before him, that instruments with uneven surfaces are more difficult of disinfection than perfectly smooth ones.

A rapid and thorough disinfection is possible only after such preparation of the instruments that the disinfectant can most favorably act upon the metallic surfaces. This preparation, according to Kuemmel, consists in a thorough washing and brushing with warm water and a potash soap—schmierseife, sapo viridis. New instruments that were so scrubbed did not develop colonies, though no further exposure to an antiseptic solution was practiced.

Instruments that had been used in post mortems were rendered thoroughly asceptic after the above process of soap-washing, by submersion for one minute in carbolic acid, or sublimate solution, or chlorinated water.

As for sponges, at the present most distrusted for surgical use, K. says that the most foul, that are saturated with blood and filth from cadavers, or have been used in operations upon phlegmonous or diphtheritic patients, can be rendered pure by a good washing in green soap and dipping thereafter for one to two minutes into a five per cent. solution of carbolic acid, or a 1:1000 corrosive sublimate solution, or into chlorinated water. Without the previous soap-washing, soaking for a half hour in any of these solutions does not suffice to sterilize the sponges. Compresses, bandages, etc., can be perfectly sterilized by washing with the green soap and subsequently saturating with the above-mentioned disinfectant solutions.

Surgeons' silk should be kept permanently in a 1:1000 sublimate solution. Catgut may be sterilized by soaking for twelve hours in sublimate, 1:1000, and preserving in alcohol and glycerine.

A chief interest is elicited by the discussion of the purification of the hands. This can be accomplished rapidly and surely, even if infectious matters have been handled; however, great care and circumspection must be exercised.

Kuemmel reports as follows:

I. After an autopsy he brushed his hands again and again with ordinary soap and water. The depressions and scratches made upon

the gelatine swarmed in several days with micro-organic development.

II. After an autopsy of a case of puerperal peritonitis, he washed his hands carefully with ordinary soap and water with five per cent. carbolic acid, and with chlorinated water. The result, upon contact with the gelatine, was the development of numerous colonies after a few days.

III. The same result ensued after employing sublimate, 1: 1000, on the third day.

IV. After brushing the hands, so infected, with green soap and warm water, and subsequently carefully washing in solutions of boric acid, salicylic acid, thymol or sublimate, 1: 1000, colonies developed on the gelatine on the 5–7 day. If, after the green soap treatment, carbolic acid in a five per cent. solution is used, no result follows the dipping of the fingers into gelatine.

The practical application of Kuemmel's experiments lies in this: That more stress should be laid on the employment in first order of soap, green soap preferably, water and nail-brush, and that the antiseptics are of especial value only in second order to keep purified objects in the sterilized state.

Although five per cent. carbolic acid solution, and probably chlorinated water, are the most powerful germicides, according to these studies, still sublimate in the strength given is of value on account of its non-irritable, non-odorous qualities.

Instruments, then, should be as smooth and simple as possible, and are to be cleansed first with green soap, then placed in a 3–5 per cent. carbolic solution. Sponges must be rendered innocuous by washing in green soap and preserving them in sublimate. The hands should be several times brushed with water and green soap and then thoroughly washed and brushed with a five per cent. solution of carbolic acid.—*Annals of Surgery* (*W. M. Review*).

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BUFFALO, N. Y., APRIL, 1886.

THE BUFFALO COLLEGE OF PHARMACY.

We are glad to announce to our readers and their trusted allies, the pharmacists, that the University of Buffalo has recently established a new department, to be known as the Buffalo College of Pharmacy.

The constant advancement in the various departments of medicine and pharmacy, as well as the protection of the public, demands that those engaged in the responsible duties of the two professions should receive a careful training and proper education. The druggist occupies a two-fold position, and it is therefore important that his preparation should be such as to fit him for both business and professional life. In no other branch of trade is there call for such constant vigilance to guard against the least inattention; nor is there any in which greater effort is required to withstand the many distracting influences always present in a place of business. Besides this "eternal vigilance" the minor qualities of patience, neatness, dexterity in manipulation and readiness of manner are important to the salesman at the serving counter, but are essential to the dispensing pharmacist. He in addition must acquire such control of his faculties of observation and reflection that at the close of a process each step may be mentally checked and its correctness guaranteed. The cultivation of these qualities

with experience in business constitutes the pharmacist's training, and his best college is the dispensing druggist's store.

But what of his education as a professional man? The commercial questions of cost and selling price, profit and loss, press upon the pharmacist, and neither he nor his assistants set apart time for continuous study. The proprietor becomes absorbed in his business pursuits and too often neglects the education of his assistants. Indeed, after years of personal experience, we believe that the majority of pharmacists regard their assistants as employes and not as students.

This relation between proprietor and clerk removes from pharmacy its importance and dignity as an art and subjects it completely to the customs of business. The student obtains a false idea of his chosen profession, loses much of his interest in study, and the result is, most of our pharmacists grow up and become licensed to practice without having had their studies properly directed. The most ambitious and capable labor under difficulty without instructors; and it is to supply this need of a systematic course of instruction that the Buffalo College of Pharmacy has been established.

The pharmacists of Buffalo have long been unanimous in their desire to have such an institution, and it has been the subject of official action by the Erie County Pharmaceutical Association.

Recent legislation has developed this desire into an urgent need. The Erie County Pharmacy law, the law establishing a State Board and regulating the practice of pharmacy throughout New York, the Ohio State Pharmacy law, one of the most stringent statutes in the country, as well as the "Major and Minor" laws of Quebec and Ontario, all call loudly for systematic instruction within a great circle of territory, of which Buffalo is the central city.

Each of these laws requires that both pharmacists and their assistants shall procure a certificate, which is granted only after having passed an examination or presented the diploma of a properly incorporated College of Pharmacy.

The need has become urgent, and the Council of the University has made special effort to supply the want by providing the following faculty:

Rudolph A Witthaus, A. M., M. D., Professor of Pharmaceutical Chemistry.
E. V. Stoddard, A. M., M. D., Professor of Materia Medica.
David S. Kellicott, Ph. D., Professor of Botany.
Willis G. Gregory, M. D., Professor of Pharmacy.
Frank P. Vandenbergh, M. D., Professor of General and Inorganic Chemistry.

Professor Witthaus is widely known as the author of a work on medical chemistry and as Professor of Chemistry and Toxicology in the Universities of New York and Buffalo. As an analytical chemist he has few peers and no superior.

Professor Stoddard, of Rochester, has long held the chair of Materia Medica in the Medical Department, and is now spending a year abroad, perfecting himself in materia medica and therapeutics.

Professor Kellicott, who has for many years filled the chair of Natural Science in the State Normal school at Buffalo, brings to the new college the prestige of a national reputation. To many of our readers he is personally known as an indefatigable student and thorough teacher; while to others he may be known by name only, for his original work in microscopic botany and zoology has given him an extended acquaintance among American scientists.

Dr. Gregory appears in a new *role* as a teacher, but has grown up in pharmacy as assistant and finally as partner with his father. His ambition is in the line of a manufacturing pharmacist, and hereafter a large part of his work will be done in the college laboratory, thus affording the student abundant opportunity for special instruction.

Dr. Vandenbergh has served as assistant to Professor Witthaus and Lecturer on Chemistry in the Spring Course attached to the Medical Department for several years, and is now Adjunct Professor of Chemistry in that department.

There has also been created a Board of Curators, whose duties it shall be to examine the students, and, in case of satisfactory examination, to unite with the faculty in recommending that the Council of the University confer upon them the degree of Graduate in Pharmacy.

It is further intended that the Board of Curators shall act as an advisory body, to aid the faculty by suggestions as to curriculum, and to otherwise advance the interest of the college as may be within their power.

Here, again, the Council has exercised care, and feels a pride in presenting, as their members of the Board, the names of Julius Rieffenstahl, R. K. Smither, C. M. Lyman, Edward S. Dawson, Jr., Clay W. Holmes, G. Herman Haas and William W. Henderson.

Mr. Rieffenstahl needs no introduction to the laity in this section, nor to members of his profession in either the State or American Association. Mr. R. K. Smither is widely known in pharmaceutical circles, and is President of the County Board of Pharmacy. Mr. Lyman succeeded William H. Peabody in business many years ago, and is now senior member of the well known firm of Lyman & Jeffrey.

The remaining four Curators have been chosen from among the reputable pharmacists in this section of the State, outside of Buffalo.

Edward S. Dawson, Jr., is a leading druggist of Syracuse, and is Secretary of the State Board of Pharmacy.

Mr. C. W. Holmes, of Elmira, is a prominent member of the New York State Pharmaceutical Association, and has been its Secretary since 1880.

Messrs. Haas, of Rochester, and Henderson, of Jamestown, are well-known pharmacists, and have been members of the State Association since its organization.

Soon after the college was established, the faculty held a meeting and organized by electing Professor Kellicott to the position of Dean, Dr Gregory to that of Registrar, and Dr. Vandenbergh, Secretary and Treasurer.

It was then decided to hold the sessions in the building occupied by the Medical College, and certain needed alterations were provided for.

The plan of study has already been outlined, and includes, besides four years' practical experience in a drug store, obligatory courses in Chemistry and Pharmacy, and an optional field and laboratory course in Botany.

A complete announcement is in active preparation, and will be issued and distributed as soon as finished.

In the meantime, letters of inquiry will be fully answered if addressed to the Secretary, Buffalo College of Pharmacy.

DOES HYDROCHLORIC ACID PREVENT FERMENTATION IN THE STOMACH?

Some remarkably important and able original work has been done of late by Dr. Wm. D. Miller, of Berlin, concerning the presence and reaction of schizomycetes in carious teeth, in human saliva, and, more recently, those determining fermentation in the stomach. Dr. Miller will be remembered by many in this vicinity; an American by birth, he studied in this country, and chose the profession of dentistry for his life's work. Circumstances led to his permanent settlement in the German capital, where his industry and original work have led to his appointment to a professorship in the University of Berlin, where he enjoys the distinction of being, so far as we know, the only American thus honored in Germany. It is also a matter of local pride that the greater part of his work has been given to the profession through the pages of our esteemed contemporary, *The Independent Practitioner.*

Miller has made positive what was before conjectural—that all forms of dental caries are owing to the penetration into and presence in the dental tissues of various forms of fungi, and has isolated and described a number of species all of which have the pathogenic property. In saliva, also, he has detected numerous bacterial forms which had previously escaped recognition, and has made concerning them physiological and pathological observations of great importance. In fact, so-called dental pathology needs now to be entirely rewritten in the light of his researches. In the current number of *The Independent Practitioner* he deals with a kindred subject of great importance. It is known that certain forms of stomach fungi are characterized by the property of generating large quantities of gas. Miller has been studying the capability of hydrochloric acid to inhibit this fermentation. A mixture of chewed bread and meat with milk and sugar was richly infected with three forms of stomach fungi known to generate gasses freely. To different portions of this mixture hydrochloric acid was added in varying proportions, 1 in 2,500 to 1 in 500. He found that not till the acid reached a relative proportion 1.6 in 1,000 did fermentation cease. Salicylic acid effected the same in proportion of 0.4 in 1,000. If, therefore, in a food mixture we wish to prevent fermentation, or when once begun to arrest it, we know the necessary proportionate

amount to give. This amount may be diminished by allowing for a certain quantity present in the gastric juice. This quantity at the normal is 2 in 1,000, and since fermentation does not take place till the proportion of acid is reduced to 1.6, when fermentation continues, we are justified in estimating that the stomach juices lack 0.4 in 1,000 of acid, and that this amount must be administered in order to restore the normal condition.

According to Bidder and Schmidt, the stomach secretes, daily, ten to twenty litres of gastric juice. Granting that this estimate is too high (?), and accepting five litres as a basis for argument, we have ten grammes of hydrochloric acid daily furnished by the human stomach for its needs. This being the case, it will be seen that the ordinary three to ten drop doses of our posology can make but very little impression. If a palpable effect be desired, we must give it in considerable and repeated doses. In case of the ordinary lactic acid fermentation, outside of the stomach, the process will soon terminate by virtue of the antizymotic action of the acid thus produced. But in the stomach the excess of acid is speedily absorbed. Thus it will be noted that only a very small change in the quantity or quality of the gastric juice is necessary to render possible a continuous fermentative process in the stomach, *i. e.*, a chronic dyspepsia.

We regard these investigations as of great importance, and trust that their significance may obtain general recognition. We could wish that they might be supplemented by similar studies into the action of fresh nitro-muriatic acid.

THE DEATH OF DR. FLINT.

Again we are called upon to record the death of one of the great men of our profession. Dr. Austin Flint, Sr., died in New York suddenly of apoplexy on March 13.

The loss will be particularly felt in this city, where Dr. Flint had so many friends and admirers. To few men is the medical profession of Buffalo so deeply indebted as to him. For the greater part of twenty-three years he lived and labored in this city, and it was here that the foundations of his greatness were laid. As the

originator, in 1846, of the *Buffalo Medical Journal*,* which enjoyed a large reputation under his editorship, and as one of the founders of the Buffalo Medical College he did more, perhaps, than any one man to form and influence the early profession in Buffalo and in Western New York. But his influence was not felt here alone. The medical profession of the whole world has been taught by him, and medical opinion and thought everywhere shaped and changed by his efforts.

He has long been looked upon as the representative of the highest type of the American physician, and we can well permit him to be so recognized, and be proud that we have so good a representative.

Dr. Flint's loss is simply irreparable. No man stood higher in his profession than he, and no one can have a higher ambition than to emulate him. Those who were brought into personal contact with him soon acquired a tender feeling of reverence and respect which will make his loss felt by them all the more keenly.

Of the influence of Dr. Flint's death on the future of the profession and on some of the burning questions of the day we will not speculate, but this influence cannot fail to be far-reaching and deep.

* * *

THE death is announced of Dr. S. Oakley Vander Poel, of New York. Dr. Vander Poel was widely known in this State as formerly professor in the Albany College, president of the State Society, and later, health officer of the port of New York. Dr. V. enjoyed a wide reputation and held a very high position in the esteem of the profession. Of late years he had withdrawn himself largely from practice, devoting himself to hygiene; on which subject he was a recognized authority.

* * *

IN THIS issue is presented the article, promised some time ago, concerning some of the striking features of cremation. Surely, the incineration which Prof. Cary describes had nothing about it—save

* The *Buffalo Medical and Surgical Journal* was founded by Dr. Miner, as Dr. Flint carried his journal to New York with him, where, under Dr. A. Flint, Jr., it was merged into the *New York Medical Journal.*

the reality of inexorable fate—which could have wounded the feelings of the most susceptible. The description of the process and the plan of the furnace will be of interest to all. The committee which selected the Vanini system have every reason to congratulate themselves upon their success. Any incinerating furnace which requires that the first fires be lighted only a scant hour before the introduction of the body is to be accounted a decided success. When we hear of other new furnaces in this country which could only attain a partial success after thirty-six hours, it makes us feel as if the Vanini system were by all means the best.

The Buffalo Cremation Company are now ready to undertake the perfect incineration of any body committed to their charge.

* * *

UNAUTHORIZED translations and excerpts from Prof. Liebreich's articles concerning lanolin have already appeared in some of our contemporaries, but the translations made for THE MEDICAL PRESS by Dr. Wende have been the only ones authorized by their learned writer, and consequently bear upon their face the imprint of authenticity. The paper in the March issue was perhaps of greater pharmaceutical and chemical interest, but the article in this number, with the formulæ, will be found of the greatest practical import to the practitioner. Already, since having been able to procure the drug, the writer has had results with lanolin which he has never seen with other vehicles, and such is the unanimous verdict of all who have used it. If Prof. Liebreich had never done anything more for the profession than to place before it chloral and lanolin, he would still be entitled to lasting credit and gratitude.

* * *

Dr. J. P. COCHRAN, known personally to many of our community, is, we believe, the only scientifically educated physician practicing within the limits of the Persian Empire. He has established in Oroomiah a large mission hospital and dispensary, where, aided by his sister, who took a course in the Training School of the Buffalo General Hospital, and by such native talent as he has been able to educate, he is doing grand and noble work in the cause of

humanity, at the same time seeing more cases than it falls to the lot of many to see. He has not only gained a strong foothold for his mission work, but, by his skill, has not only overcome the wonderfully strong native prejudices, but has established a great name and fame for himself. It is most pleasant then, for us to be able to promise our readers, by his courtesy, regular letters from Dr. Cochran, in which he will give account of native customs and beliefs, and of diseases peculiar to the Orient. As he states of the subject-matter of his communication, it "is the root and foundation of all medical and surgical practice, without a knowledge of which even an American or European physician may be seriously embarassed here at times; for, unless one has gained the confidence of his patient and won him over to a belief in his science, one may commit some blunder in the matter of (native) diet or medicine, which would prove that he did not know his business."

We are very sure that the doctor's letters will be of exceeding interest.

Correspondence.

LETTER FROM PERSIA.—NATIVE NOTIONS CONCERNING RATIONAL THERAPEUTICS.

OROOMIAH, PERSIA, Feb. 1st.

EDITOR MEDICAL PRESS:

Dear Doctor: It may be of interest to some of your readers to see a brief account of some of the laws that govern medical and surgical practice in Persia. The ordinary Persian doctor (a few have been to Europe or have studied with European physicians) has very crude and incorrect ideas of anatomy and physiology. No autopsies are now held. Dissections are never thought of. No correct works on the above sciences are to be had. Certain natural laws are recognized, and these have to be observed most thoroughly by every practicing physician. Ordinary people, too, are familiar with them.

The process of digestion and assimilation is supposed to be carried on in the following manner: The food, on entering the stomach, undergoes a preliminary digestion, which separates it into a semi-solid and a liquid portion, the former passing off as waste matter, and the latter going to the liver. Here a second separation is effected—one part immediately going to the kidneys and thence to the bladder as urine, while the other part remains to undergo a thorough metamorphosis, or, as it is expressed here, a distillation. The result of this is to separate the contents of the liver into four new substances or humors: blood, bile, phlegm and "sodaw" (no English equivalent). These are different in density and weight, and are said to lie in different layers in the liver. The "sodaw" is the heaviest and gravitates to the bottom, whence it is carried to the spleen. The next lightest is phlegm, which resides in the lungs. The third is blood, which goes to the heart and thence over the entire body. The lightest, bile, goes to the gall bladder. The spleen, lungs, heart and gall bladder are thus the receptacula of these four humors, while all circulate more or less with the blood. Now, if any one or more of these be in excess of the usual amount, sickness must follow. For instance, an excess of "sodaw" will produce any of the skin diseases; while too much phlegm, loss of muscular and nervous power—hence all neurosis. An excess of blood produces inflammations, congestions, etc., and too much bile gives headache, vertigo, amaurosis, etc.

Examination of the pulse, tongue, countenance, taste, urine, and the kinds of food he craves will inform the physician as to which of these substances is the cause of the disease. If the pulse be strong and rapid, the taste of the mouth sweet, the tongue red, the urine reddish, the countenance flushed and the patient have a desire for warm and wet (explained later) food, blood is the cause of the evil. If the pulse be strong but slow, there be a lack of taste, the tongue be white, urine colorless, face pale, and craving for cold and wet food, there is phlegm in excess. If the pulse be small and slow, the taste salty, the urine dark, the countenance dark, with an appetite for cold and dry food, "sodaw" is in excess. If the pulse be small but rapid, the taste bitter, the tongue yellow, the face and eyes yellow, the urine greenish, and warm and dry food be desired, there is bile in excess. All of this, you will notice, can be traced back to

the theories of Hippocrates, more or less modified. The Persians believe, too, that there are four elements—earth, air, fire and water, and that these elements have, each in turn, two characters, thus: Earth is said to be cold and dry; air is said to be warm and wet; fire is said to be warm and dry; water is said to be cold and wet. And in respect to its character, "sodaw" (which may be called black bile) is like earth, cold and dry; blood is like air, warm and wet; bile is like fire, warm and dry; phlegm is like water, cold and wet. It follows that all kinds of food and drink, being composed of one or more of these four elements, must have also their corresponding characteristics. But the law seems to be a most arbitrary one. Sugar, for instance, is warm and dry, while honey is warm and wet; beef is cold and dry; mutton, warm and wet, etc.

In treating a case, supposing it be found by the above examination that there is an excess of bile (which it must be remembered is warm and dry) in the system, some medium that is cold and wet must be given and the food likewise must be of this character. In other words, *similia similibus non curantur.* Venesection is always performed for diseases due to excess of blood; emetics for excess of bile; cathartics for phlegm; alteratives for "sodaw." Bleeding and cathartics are their mainstays in treatment, next to diet. Water is allowed in but few diseases and never in surgical wounds. Warmth and exclusion from air and water are the *sine qua non* in the treatment of sores. The diet of surgical cases must be closely looked after as well.

Sincerely,

J. P. COCHRAN.

NOTES FROM THE SERVO-BULGARIAN CAMPAIGN.

BY PROF. MOSETIG-MOORHOF AND DR. WITTELSHOEFER.

Translated and Arranged for "The Medical Press" from the "Wiener Med. Wochschft.," Nos. 1 and 2, 1886, by Irving M. Snow, M. D.

The timely assistance of the International Aid Association has wrought a great change in the surgery of the Servo-Bulgarian war. Before this beneficent charity was utilized in the fraternal warfare now raging in the Balkan States, that form of surgery prevailed

which Trelát has stamped with the significant title of "dirty surgery." The neglect of antiseptic precautions was disastrous to the last degree, and with few exceptions all wounds showed the symptoms of more or less profound septicæmic disease. A picture of decomposition seldom seen in modern surgery was concealed beneath the dirty charpie, and hospitals were to be recognized by the fœtid odor peculiar to sepsis. The equipment of the field surgeon of the Servo-Bulgarian armies consisted of charpie, concentrated carbolic acid and bandages. Nevertheless, antisepsis was rarely secured; local cauterization of wounds and surrounding tissue were frequent, probably caused by lack of diluents, and, also, utensils in which to prepare the antiseptic solutions. It is also to be noted that the antiseptic influence of carbolic acid is quite temporary, and as it is usually applied in an oily or aqueous solution, seldom procures complete immunity from septic germs.

The task of the field surgeon is to receive a great number of wounded in a short period of time, to apply dressings upon fresh wounds which shall exclude the specific ferments of putrefaction, and which must often be worn for many days, until the patient has been transported to a hospital, where his wounds can be freshly dressed.

Thus the antiseptic must fill the following requirements: (1.) Its mode of administration must be technically simple. (2.) It must not be volatile. (3.) Even when used in full strength, it must neither cauterize the raw surfaces nor act injuriously upon the organism. It is, therefore, evident that those antiseptics used only in dilution or mixture must be excluded, and only those remedies which can be used in powder are available. Iodoform and salicylic acid are, therefore, to be preferred, and the army surgeon should be provided with a sufficient quantity of both antiseptics.

After the decisive battles of Trn, Slivnica and Pirot, the International Aid Association first assumed charge of the hospitals, and rigidly enforced antiseptic precautions. Other details were carefully attended to, very necessary after the careless treatment which prevailed before. Exit was given to retained putrid discharges; the surface around the wounds was carefully cleansed, and the injured parts placed in an easy and appropriate position. In the choice of

antiseptics carbolic acid was used for the hands and instruments, and for dressing the wounds, sublimate and iodoform. The former was used in the strength of $\frac{1}{2}$ to 1 per 1,000, and the latter in the form of powder, in emulsion, or as iodoform gauze.

Under the new regime and treatment, the mortality in the Belgrade hospitals has been relatively small. Prof. Mosetig-Moorhof believes the advantages of iodoform dressing to be well proven, but rejects mixed dressing, holding that the toxic effects of both iodoform and carbolic acid are increased when used together. Iodoform is especially applicable in wounds of the mouth or rectum where antisepsis is difficult to secure. He reports three cases of secondary arterial hemorrhage caused by contusion of arterial walls from projectiles. The bleeding came on 6–8 days after the injury, from sloughing of the arterial walls, and was accompanied with the sudden formation of diffuse false aneurisms, of various sizes. The arteries involved were the subclavian, vertebral, and tibialis posticus. In the first two cases ligation in loco was impossible, in the last the femoral artery was tied. The hemorrhage in all three cases was arrested by the use of the iodoform gauze tampon. The tampon over the subclavian artery remained ten days in place, and was even then completely odorless. He protests against a method of using iodoform which Langenbach describes as "the iodoform scab dressing." It consists in applying iodoform in powder freely and covering the surface with Brun's wadding, through which the air can freely enter. The wadding dries upon the raw surface and the secretions of the wound are retained under the stiff adherent covering, causing local and constitutional disturbances. Asepsis is not secured and the exit for the secretions of the wound is destroyed. Prof. Mosetig-Moorhof covers the surface of the wound with iodoform, and either next applies adhesive plaster and closes the whole with wadding or wood wool, or uses several layers of unpermeable material and renders the whole dressing secure from atmospheric influence. Six hundred patients have been treated in this manner in his ward without the occurrence of a single case of iodoform poisoning, 12,000 separate dressings having been made.

A proclamation of King Milan, of Servia, dated December 12, 1885, attests the recognition of the great success of antiseptic sur-

gery obtained in official circles: "As science and experience have recently furnished incontestable proof that by the antiseptic treatment of wounds extremely favorable results have been obtained, I find myself constrained to order the use of these methods (sublimate and iodoform) in all the hospitals in my kingdom. Henceforth surgeons are requested to practice exclusively antiseptic surgery. The hospital authorities are commissioned to procure the necessary materials and apparatus, and to insert their cost in the budget of their hospitals. The medical attendants and nurses are also to be practically instructed in this method." MOSETIG-MOORHOF.

* * *

The surgeon meets, in Bulgaria, a race which is peculiarly fitted for the hardships of military life, and which endures the accidents and operations inseparable from the casualties of active warfare with great fortitude and courage. The Bulgarian peasant is usually handsome, strongly built, well nourished, and possesses an extraordinary aversion to operative surgery, both upon himself and his comrades. He, however, always submits to the inevitable with stoical quietude and patience. In the hospitals chloroform is usually easily administered and well, being accompanied by neither a stage of excitement nor by vomiting. The facility with which anæsthetics are given, and the prosperous convalescence of the wounded, are probably due to the abstinent habits of the Bulgarians, who restrict themselves to a glass of "wutky" or gin taken upon a Sunday. Small-pox, syphilis, tuberculosis, caries, are almost unknown. Hence, patients rally quickly from the shock of capital operations, and wounds heal rapidly without disturbing accidents. Yet patients are usually received with septic wounds in a septic condition. Suppuration to an extent seldom witnessed by the veteran surgeons of Austrian climes is seen here daily. The unfavorable condition of the wounded is caused by the total lack of immediate help or its utter inadequacy. A long interval of transportation in a miserable peasant wagon, over rough roads, is endured by the sufferer before he finds permanent rest in the hospitals. After three, four or five days of jolting, wounds dressed with charpie, and generally with Monsel's solution, arrive in a condition

which I need not describe. Far more unfortunate, however, are those who fall into "scientific hands," which carelessly apply a firm gypsum bandage over an open wound. Under this rigid dressing is concealed a picture of suppuration and a history of agony which should be witnessed by the surgeon who applied the dressing. Prof. Wittelshoefer states, he has no statistics to show the frequency of primary operations, especially amputations, but is of the opinion that to their virtual abandonment may be attributed the bad condition of the wounded. Bulgaria, in her glorious career, leaves behind many cripples; but many limbs which might have been preserved, if immediate help had been efficient, have been amputated in the hospitals to save the patient's life. Surgical diseases, erysipelas, tetanus, gangrene, have not yet appeared in the Bulgarian hospitals, and aside from the bad condition in which the wounded arrive, surgical cases generally do well.

The Servians commence firing at very great distance while the Bulgarians reserve their fire until close to the enemy. The Bulgarians are usually the aggressors and, attacking at dusk, give their opponents neither correct firing distance nor exact aim. Thus the Bulgarians receive few wounds from the small shot used by the Servians, but many flesh wounds are seen where balls have glanced from even comparatively weak bony parts. From the numerous injuries to the hands and fingers, self-mutilation would seem to be frequently practiced by the Servians and Bulgarians; but an explanation of these wounds, more flattering to national pride, is given by German surgeons. The wounds are neither scorched nor blackened, conditions observed when the soldier mutilates himself. Testimony of eye-witnesses further shows that in skirmishing the soldier finds protection behind rocks and trees for all parts of the body except the head and hands, which must be exposed in aiming and firing. Surgeons see the injuries to the hands and fingers; wounds of the head are rarely brought to the hospitals. Further evidence that these wounds are not self-inflicted has been obtained by studying the direction of the shot and picturing the position assumed in loading and aiming. Prof. Wittelshoefer relates an interesting case occuring in his hospital; a ball passed obliquely into the arm through a small opening in the pectoralis muscle, entered the chest without an

external axillary wound and made its exit from the back. Fourteen days after the injury there appeared a traumatic aneurism of the axillary artery with compression of the trachial plexis, paralysis of its distribution and venous stasis.

The method of treating wounds and the easy administration of chloroform has already been described. In amputations the limb is rendered bloodless by elevation (Lister's method) while friction above the area of suppuration is made toward the trunk and the limb is tightly constricted by a tube; a loss of blood is thus avoided without incurring that vascular paralysis which usually follows Esmarch's method. All surgeons here, with the exception of Langenbach, of Berlin, use iodoform either in the form of gauze or powder for their dressings. The manufactured iodoform gauze has been found to be unreliable, and is replaced by gauze prepared in the hospitals. For irrigating filthy surfaces potassic permanganate is used; in severe cases the wounds are washed with a solution of chloride of zinc; simple operation wounds are treated with carbolic acid.

The results obtained are quite favorable. Five amputations, among which were two of the thigh, one exarticulation of the arm, one thoracotomy, a resection of the shoulder, numerous extractions of balls, often complicated with splintering of bone, two very severe gunshot wounds of the thigh with fracture of the femur, numerous gunshot wounds of smaller bones with laceration of the soft parts, many incised wounds, mostly of the lower extremity, furnished only two fatal cases. One death occurred without operation in a soldier suffering from septicæmia soon after his admission to the hospital. The other fatal case was that of a man with extensive destruction of the shoulder joint and a gun-shot wound of the tibia; death followed amputation of the thigh. The relative mortality is the more favorable when it is considered that almost all wounds treated were in a more or less septic condition when received. WITTELSHOEFER.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, March 2, 1886.

Reported by Charles G. Steele, M. D.

Dr. W. W. Potter presided. Dr. William G. Ring read a paper on "Renal Hemorrhage," citing a case which had come under his observation. A young man, aged eighteen, working in a stone-yard, lifted a very heavy stone. A few days later he experienced a severe pain in the lumbar regions. He called upon Dr. Ring, who found the urine tinged of a red color. By a process of exclusion, the doctor diagnosed the case as one of hemorrhage from the kidneys, and he believed it was due to a slight laceration of the cortical substance of one or both kidneys. Gray says the kidneys can be moved downwards by pressure about one-half inch, and the strain of lifting a heavy weight, like the stone, may have pushed them a greater distance.

To differentiate renal hemorrhage from urethral, it is only necessary to remember that when the flow is from the urethra it is continuous and quite independent of the act of urination. When from the prostate and neck of the bladder, it is not continuous, and follows the act of urination. When from the bladder, the blood is uniformly mixed with the urine. This is also the case when from the kidneys; but if in the former case the bladder be filled several times in succession with clean water, the water, when drawn off, will be tinged with blood. When from the kidneys, after filling the bladder with water two or three times, the water will be clear when drawn.

Under the head of discussion, Dr. Coakley thought hemorrhage came very often with calculi. He thought climate and the water supply had a great deal to do with the matter.

Dr. Hartwig thought a microscopical examination would have told whether or no the blood was from the kidneys.

Dr. Potter related an interesting case of renal hemorrhage, the result of traumatism. One wheel of a wagon, laden with brick,

passed over the abdomen of a man. After being in a condition of shock and collapse for a few hours, the patient rallied, and eventually recovered. Blood was passed with the urine for some time and Dr. Potter believed it came from the kidneys.

Dr. Hartwig, under voluntary communications, related the following interesting case: He was called to see a child, aged four and one half years, that had just recovered from diphtheria. The child had passed no urine for a number of hours, and despite treatment died. The symptoms resembled those of cholera in the second stage. He made a post mortem and found a large white kidney, like that of Bright's disease. The kidney looked as though it might have been diseased a year, while there was a history of but fourteen days illness. There was no blood or urine in the kidney. Under the microscope it was found that fatty degeneration had already begun and some of the cells were destroyed.

Dr. Brecht, who had attended the child when it was ill with diphtheria, said the case was positively not one of scarlet fever, and that he gave very little chlorate of potassium.

Diseases prevailing were reported as being pneumonia, bronchitis, influenza and sore throat.

The president announced that the next would be the annual meeting, and that officers for the ensuing year would then be elected.

ERIE COUNTY MEDICAL SOCIETY.

Special Meeting March 19, 1886.

Dr. E. T. Dorland, president, in the chair; Dr. Wm. H. Thornton, secretary.

The first business taken up was the consideration of the part this society is to take in entertaining the delegates to the annual meeting of the American Society for the Advancement of Science, which convenes in Buffalo next August.

After some discussion the president appointed Drs. Lucien Howe, A. R. Davidson, Bernard Bartow, H. R. Hopkins and A. H. Briggs as the committee to represent the society in connection with similar committees from other organizations.

The secretary read a letter written to Dr. Rochester by Dr. P. B. Porter, secretary of the New York County Association, stating that the association would hold a memorial meeting in honor of the late Dr. Flint on the 19th of April, and requesting that the profession in Buffalo be represented, or if that should be impossible, a communication on his life and services be sent.

The following memorial was read and adopted:

It would seem most fitting and appropriate that some expression be given by the society of its sense of the loss sustained by the medical profession in the recent death of our much-esteemed former fellow-townsman, Dr. Austin Flint, sr. Dr. Flint was an honored member of the Erie County Medical Society for many years. It may be truthfully said that he was the first to give a scientific character to its meetings. The death of such a man is felt far and wide. In many parts of Europe his reputation as a scientist and great physician is as well known as in America. The *London Lancet* years ago uttered but the simple truth, when in a review of his great work on "The Principles and Practice of Medicine," it said: "'Tis given to but few men to tread in the footsteps of Austin Flint." Dr. Flint was a resident of Buffalo for twenty-three years, a member of this society for eighteen years. He came to Buffalo in 1836 and became a member of the Erie County Medical Society in 1841. In 1856 he removed to New York city. It is not necessary to speak at this time of his worth and of his fame as a great writer and teacher. What student of medicine does not know or has not heard of Dr. Flint? What practicing physician, cousulting his writings, has not felt that the record before him was stamped with the impression of a great mind, and with the assurance of its fidelity and truth? It has been said that the best evidence of reputation is a man's whole life, and by his whole life may be understood his private as well as his public life, or in other words, his life as a man and as a physician. To those who had the pleasure and the honor of an intimate acquaintance with him, how admirable was the man! As a host or presiding at the social board, what grace of manner conjoined with sparkling wit or genial humor! In professional intercourse, or if called in consultation, what could exceed his delicacy of conduct towards his fellow-practitioners! Guided by his Christian principles he evinced a perfect abnegation of self. Therefore be it the sense of this society:

That while in accord with the sentiment of the profession as to his conspicuous abilities, as an author of world-wide distinction, and as a teacher, impressive and graceful in manner and scholarly and exhaustive in matter, we would, as fellow-practitioners for many years in this city, give special expression to our appreciation of him as an associate in professional labor, at the bedside, and in association discussions. And in those respects it is hazarding little to say that in the dominion of physical diagnosis of lung and heart affections our deceased friend had no superior, perhaps no equal. He was of that rare type of the medical practitioner, and a gentleman who, by reason of his careful observations, experience and erudition, his courtesy and consideration toward fellow-workers, especially those yet inexpert, his fascinating manner of conveying his suggestions and advice, his high merit and great modesty of demeanor, with many other excellencies, rendered it well-nigh equivalent to a liberal education to be favored with long and intimate fellowship with him. One could not fail to be impressed that in his intercourse with his associates he was actuated by, and strove to illustrate the spirit of the injunction, "Put yourself in his place," it being another form of the Golden Rule. When a professional character of such exceptional greatness and excellence drops out of our ranks, we do but honor our calling and ourselves in paying tribute to his memory.

James B. Samo,
P. H. Strong,
C. C. Wyckoff.

It was thought advisable that one of the three signers of the memorial, or some one chosen by them, should go to New York, and read the memorial before the New York Association. The sum of twenty-five dollars was appropriated towards paying the expenses of the delegate who should be selected.

CHICAGO MEDICAL SOCIETY.

Official Report, Stated Meeting, February 1, 1886.

The President, C. T. Parkes, M. D., in the chair.

Dr. J. Suydam Knox read a paper entitled "Quinsy as a Rheumatism." The author reported the treatment of fifty cases of the disease. In forty-five cases (95 per cent.) there was a positive rheumatic diathesis. Forty of these cases were cured in thirty-six to seventy-two hours, without suppuration. The treatment was salicylate of sodium, and hot alkaline gargles, or the repeated insufflation on the tonsils of bicarbonate of soda. Five cases, decidedly rheumatic, were not benefited by similar treatment. Five cases, not rheumatic, were not benefited, and at the end of forty-eight hours the ordinary treatment of quinsy was followed. Only one of these cases did not suppurate. The doctor concludes that a large majority of quinsies are rheumatic inflammations: 1. From the percentage observed. 2. From the success of anti-rheumatic treatment. 3. From the similarity between the symptoms of quinsy and rheumatism.

Dr. Knox said that wherever possible he used an insufflator and blew bicarbonate of soda directly on the tonsils, using as much as thirty grains, and allowing it to remain on the tonsils as long as possible, to be followed by a gargle of water as hot as could be borne, and to be continued until the throat was cleared, which would take from half an hour to two hours. He sometimes used carbolized lime water, with morphia. He could not say as to every case, but that where suppuration takes place it is usually in the gland. An abscess is formed from glandular inflammation, and suppuration takes place through the gland.

Dr. A. B. Strong reported a case of intubation of the larynx for acute catarrhal laryngitis, with recovery. He said the patient was a child, æt. 2½ years, delicate and small for her age. She had been sick thirty-six hours, when it was decided that intubation was imperatively demanded, and it was done. Instant relief was obtained. The act of introducing a No. 3 tube had caused such an abundant ejection of the mucus, and the breathing was so easy, that the tube was withdrawn, and the child passed the night comfortably. However, at 4 P. M. of the succeeding day the tube was re-introduced with the same success, but about twelve hours after, the child caught hold of the thread and withdrew the tube. The No. 2 tube was then placed in position and remained there sixty-eight hours, when recovery was complete. Dr. Strong said intubing the larynx has advantages over tracheotomy in being quickly performed, furnishing instant relief without cutting or bloodshed, being free from danger, and readily assented to by the parents. The care of the patients after operation is slight as compared with tracheotomy, as the tube does not have to be interfered with, nor does it often clog up. The tubes as now made, those of Dr. O'Dwyer, are not easily coughed up. It is easier to introduce than remove the tube, owing to the fact that if the thread is left in the mouth it causes coughing and difficulty in swallowing. It was observed that during the thirteen hours the child wore the tube with the thread she had more difficulty in swallowing than subsequently when the thread was withdrawn, the thread being drawn across the epiglottis probably interferes with it closing the glottis during deglutition. Besides, the thread requires constant watching lest the child grasp it and withdraw the tube. Still, in case a mass of mucus should lodge against the lower end of the tube and stop respiration, the thread might be the means of saving the child's life by allowing the tube to be speedily withdrawn.

The president said it was a matter of surprise to him that so small an opening would allow the exit of secretions, as in the case just reported. It had been his experience that recovery always follows cases of catarrhal laryngitis. However, in these cases, he thought the introduction of the tube might be of great benefit in relieving difficult breathing or dyspnœa, and in allaying the fears of friends. He was aware that a very small opening gave air sufficient for inspiration for

some hours. He once operated on a boy about five years old in whom the trachea by improper manipulation was turned in some way, and the incision made in the side of the trachea. When the external tracheotomy tube was introduced into the wound the child breathed quite well, the suffusion of the face passed away and the lips became red, but still the sound of the breathing was not satisfactory to the ear. He then tried to introduce the internal tube and found the child had a return of all the symptoms of suffocation. On removing the external tube at the bottom of the wound the trachea was seen unopened. The child recovered. The president said that while the tube was in this bad position he looked into it through the fenestra, and the bottom of the fenestra was an opening through which the smallest probe could be introduced into the trachea, which enabled the child to inspire air enough to relieve the urgent symptoms. He thought that in a case of true diphtheritic laryngitis an opening of the size of the tube under discussion could, in his opinion, not give exit to any such amount of secretion as is frequently seen during an operation. He did not think that intubation of the larynx would take the place of tracheotomy; it no doubt is of great benefit in those cases where the patient is likely to die unless some measure be quickly adopted which will give time enough to allow the operation of tracheotomy. In the case under discussion the tube was worn sixty-eight hours continuously. He had not seen a case of tracheotomy where the closure of the fenestra gave evidence that the trouble with the larynx or glottis was overcome in less than six days. This was the shortest time in which he had been able to remove tracheotomy tube.

Dr. F. E. Waxham said that from his experience with intubation of the larynx he was thoroughly convinced of its utility, and its superiority over tracheotomy. He had eight recoveries out of his first seventeen cases, a result which he claimed could not be approached by tracheotomy, especially in Chicago. The ages of the patients varied from 11 months to 5 years; he considered these eight cases as being saved from certain death, as in only one case would tracheotomy have been permitted by the friends, and he had the corroborative evidence of other physicians as to the impending danger, and the urgent necessity of surgical interference. Since his last

report he had had a number of cases and had peformed the operation four times during the last week, one patient being only 11 months old, suffering from both laryngeal and pharyngeal diphtheria; the urgent symptoms were at once relieved. In another case aged 18 months, where death was impending, the tube was introduced without difficulty and the child relieved, and recovery would without doubt have been the result had not the child died of pneumonia on the second day. In another case, one of malignant diphtheria in a child of 2 years, the patient succumbed on the second day after the operation. In another case he found the patient cold and livid, pulseless and unconscious. After the tube was introduced cold water was dashed on the child's face, and in about five minutes he looked around and asked for his father; took some milk and passed into a quiet sleep. This child died from pneumonia three hours later. Dr. Waxham said that in the eight cases that recovered, in every instance false membrane was observed; when the tube was introduced the membrane was ejected, either in large flakes or broken-down masses. He recommended that in treatment after intubation nothing at all irritating should be given, as when a child takes fluid of any kind a few drops will trickle into the trachea and cause violent coughing, and this irritation will often lead to pneumonia. In a child rugged and strong, bichromide of mercury may be given to hasten disintegration of false membrane. The most remarkable case coming under his observation was a child of 4 years upon the verge of suffocation, when, upon the tube being introduced, a considerable portion of false membrane was thrown out through the tube and the violent symptoms subsided at once. The thread was removed, and the second day after the operation the child was playing about the room and continued about the house during the four days that the tube was worn, and finally made an entire and perfect recovery. Dr. Waxham thought that in regard to the comparative value of tracheotomy and intubation very much might be said. The text-books give as the per centage of recoveries from tracheotomy about one in three, but these statistics are made up from the most favorable reports. If a physician has one recovery out of three or four cases he is justly proud of it and reports the case; on the other hand, if there is one recovery out of fifteen or twenty cases, no report is made. He

had known one physician to have operated fifty times with but two recoveries. Dr. Waxham thought that the thread should always be removed, as it is a constant cause of irritation, and that no difficulty need be experienced in removing the tube with extractors. He thought intubation had a grand future.

Dr. E. Fletcher Ingals did not take an enthusiastic view of intubation excepting for young children, when he thought it would be found more satisfactory than tracheotomy. In very young children tracheotomy does not result well, and he thought intubation would be unsatisfactory in older ones until we have larger tubes. He stated the accepted opinion of surgeons to be that a tube of less than one-fourth of an inch in diameter cannot furnish sufficient air for a child to live on. Dr. Ingals thought that Dr. Waxham had been remarkably successful with intubation, and had demonstrated its utility, for which he deserved credit. Dr. Ingals thought that intubation of the larynx is preferable to tracheotomy in children less than three and a half years of age; children much older than this cannot get a sufficient amount of air through the tube now in use. He said, also, that in performing one operation he had had trouble with the gag, which was not large enough for the child, a boy of five years, who lifted his teeth from the gag and closed them on the doctor's finger. He thought there was no need of the thread remaining, as there could be little difficulty in removing the tube. Dr. Ingals thought in cases where it is difficult to get the consent of friends, or where the conditions are such that tracheotomy cannot be performed right away, intubation would be of value; there are cases not membranous in which intubation may be of value. The statistics looked pretty bad for tracheotomy, but he had seen statistics of fifteen or sixteen cases where half of them were recoveries. His success had not been quite so good, but he attributed this mainly to the fact that he had operated on five children who were almost dead, or at least had stopped breathing before the operation began. He had the good fortune once to save a child who had not breathed for what seemed to him twenty minutes. One of the strong points in favor of intubation is that it may be done early, and it does no harm even if unnecessary.

Dr. H. T. Byford said there was another way of drawing the line

which would more accurately describe the usefulness of the two operations. Intubation seemed to him the operation for private practice, and statistics so far are comparatively favorable to it as such. But the coöperation of the patient's friends, the preparation of the inspired air by passage through natural channels, the freedom of intubation from grave responsibility, its bloodlessness, the simplicity of treatment afterwards, as well as the greater rapidity with which the mucous membrane around the vocal chords will get well, are conditions which have less bearing in hospital practice, where we have trained nurses and all modern appliances, and there is more hope of success in tracheotomy. While he did not think this latter operation favorable for private practice, such advantages as having the tube under the eye, and within reach of the fingers, of an attendant, the ease of local medication, the possibility of removing shreds of membrane and plugs of mucus, and of inspecting the parts by removing the tube, and the longer time the tube can be retained, these are things that do not pertain to intubation, and which, in hospital practice, must secure for it some consideration. He said that there was one clinical fact that had not been mentioned in this connection, yet which, more than all other things put together, accounts for the success of intubation and the failure of tracheotomy as life-saving measures: in the one the patient can cough; in the other he cannot. After intubation the patient can normally close the glottis, compress the inclosed air in the lungs, and with sudden explosive force expel everything that is sufficiently loosened. This accounts for the fact that with such a small tube the patient experiences no difficulty. After tracheotomy the patient has no means of compressing the air and expelling it with sudden explosive force; he can simply inspire and expire forcibly and after exhausting efforts get rid of a little of the mucus. This desperate condition of affairs has led some surgeons to employ the dangerous and barbarous custom of introducing feathers or other irritants into the tube to stimulate the mucous membrane, which excites the patient and scatters the mucus both upwards and downwards. When somebody invents an appliance which will enable the patient to really cough through the tube, then tracheotomy will be placed upon a rational basis, and will stand some chance of becoming a useful operation. The doctor

thought tracheotomy had made a poor showing for its years of trial.

Dr. G. C. Paoli said that malignant diphtheria is a morbid poison, and that in epidemic cases there are very few recoveries. He stated that in such cases exudation takes place in the larynx or pharynx, and that an operation would only result in sending the patient more quickly to another world.

Dr. W. E. Quine said that he had operated twelve times for tracheotomy, and had not had one recovery in diphtheritic cases. He knew he was not alone in an experience of unvarying failure in cases of this kind; and he knew some surgeons now regard tracheotomy with very little enthusiasm. It seemed to Dr. Quine unfair to place intubation of the larynx in contrast with tracheotomy upon the basis of the assumption that tracheotomy is always a *dernier resort*, that it is done when the patient is absolutely moribund, and that intubation is done under the most favorable circumstances. This is not the fact. Dr. Quine said he was personally cognizant of two of Dr. Waxham's cases in which the patients were *in extremis*, and in which death would undoubtedly have occurred in two or three hours had not relief been afforded. Surgeons rarely had occasion to perform tracheotomy under more discouraging circumstances.

Dr. J. J. M. Angear said he wished to call attention to a physiological and anatomical fact that had not been alluded to, viz: that the arytenoid cartilages are not mature and that the chink of the glottis is held open by positive muscular action in small children, whereas in adults and older persons the arytenoid cartilages are mature and the chink is never closed. Dr. Angear said that a large number of children who suffocate will suffocate when there is no membrane present to cause suffocation, but simply some diseased condition that has interfered with the action of the delicate little muscles that draw back the arytenoid cartilages. When inflammatory action has interfered with these muscles drawing back the artenoid cartilages, some mechanical interference like this tube will assist these muscles to keep the chink of the glottis open and let air in. He thought a large number of children who died of diphtheria did not choke to death, but died of poison in the system, and he did not think either the tube or tracheotomy, or any other process, could

save them. If there was interference with the opening of the chink of the glottis he had no doubt the introduction of the tube would save the life of the child.

Dr. J. S. Knox said that the curse of tracheotomy are the subsequent thoracic complications, either heart clots or congestion and inflammation of the lungs, producing fatal results, and the reason probably is that tracheotomy is the final resort in cases of laryngeal obstruction. He thought that if tracheotomy were performed as early as intubation there would be fifty per cent. of recoveries. The great advantage of intubation is that it can be performed early, and the early operation of intubation would no doubt save many a life that tracheotomy would not save performed late. He thought that tracheotomy performed as early as intubation would show as good results.

The president said that he did not intend to say anything against the practice of intubation, but he did not believe that it would take the place of tracheotomy. Intubation has had but a very short trial, and it is not yet time to pronounce it better than tracheotomy. The early experience of the president in tracheotomy had been almost the same as that of Dr. Waxham in intubation. In the first fifteen cases operated on but half of them recovered, and his later experience was better than that reported by Dr. Waxham, as within the last month he had had three cases of tracheotomy, all recoveries, while Dr. Waxham reports four cases of intubation, all fatal. So far as his own personal experience went, he thought tracheotomy had the advantage. The president thought that if he should put a tube in a child's throat for the relief of laryngitis and the child died without his having performed tracheotomy, he should consider himself very much to blame. He had no doubt that cases of extreme diphtheritic laryngitis got well after tracheotomy; he had seen diphtheria of the pharynx and of the larynx recover after tracheotomy. Although he did not feel enthusiastic about intubation, he thought it had a very good place and in many cases might be very useful, but could never supplant tracheotomy.

Dr. Waxham said he had never found the tube occluded when it was removed. In one case when he introduced the tube a portion of the membrane was crowded down ahead of it, obstructing it

entirely, and the tube was ejected and was then completely filled with membrane; the child recovered subsequently. On removing the tube on the fourth or fifth day he did not find it occluded.

Dr. A. B. Strong said, in conclusion, that he had had some experience with tracheotomy, having had twelve cases with but one recovery. He had no doubt that in cases of diphtheria the membrane could come up through the opening. The case read was reported as spasmodic croup, and was not supposed to be one of false membrane, but he believed the child would have died without interference, and that belief was shared by Dr. Danforth, the attending physician. Dr. Strong said that he would hardly feel safe in leaving the tube in the trachea of a child without the thread. He agreed with the president that large pieces of membrane could not readily pass through such a long tube. In the case reported the tube was entirely free from membrane or pus when taken out.

Book Reviews.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE EAR. By Orin D. Pomeroy, M. D. 2d ed., revised, with additions. New York: D. Appleton & Co.

It is so short a time since the first edition of this work was noticed by the press, that any complete review, at present, would necessitate a repetition of the pleasant things said concerning it, when it first appeared. All the more flattering is it, too, that the demand for the book necessitates another edition, only a few months later. Doctor Pomeroy has taken advantage of this opportunity to not only go over the work, already so well done, but also to fill out certain portions which seemed to lack completeness. In the first chapter, a description is given of the various instruments used for examination, and the methods of testing the hearing. And then he considers, in regular order, the diseases of the auricle, of the external canal, of the middle ear, mastoid affections, and the unclassified diseases, such as the effects of quinine upon the hearing, and so on. An opportunity is offered to figure the different instruments, and their modifications, with which the author's name has been identified, especially the apparatus for performing Politzer's inflation, a convenient and simple method for pressing the air into

both nostrils at the same time. In the manner in which he treats the purulent diseases of the middle ear, there are some who would disagree in the conclusions arrived at. But here, as elsewhere, it shows that the facts have been carefully weighed before judgment has been given, as to the comparative advantages of the different procedures. Special attention should be called to the author's consideration of the syphilitic diseases of the ear, not only as to the manner in which they are recognized, but the different phases which they present clinically. This is a subject rarely treated as satisfactorily in text-books of this size, and the author has reason to congratulate himself in calling the attention to the subject in such a forcible manner. The number of interesting facts which are here brought out alone serves to make the work one of unusual value. If there can be considered a fault in the book, it must be the fact that it is so intensely practical. Theoretical questions relating to anatomy and physiology are passed over in silence, and only such points mentioned as have a direct bearing upon the diseases treated. It is true, a consideration of these would necessitate a much larger book, but, at the same time, a clearer idea would be conveyed to the student of the reasons of the different methods of treatment, and how the pathological conditions differ from the normal. It will be noticed, also, that the author has given due credit to American practitioners in their contributions to aural surgery; a feature, by the way, which is often wanting in many text-books of the kind. In general, it is an excellent digest of our present knowledge of otology, and must prove acceptable to many a practitioner, as to every student. H.

THE METHODS OF BACTERIOLOGICAL INVESTIGATION. By Dr. Ferdinand Hueppe; translated by Dr. H. M. Briggs. Pp. 218. New York: D. Appleton & Co. 1886.

No one can now be said to possess reasonable culture in liberal medical science who is not somewhat familiar, at least by reading, with bacteriological investigations and cultures. The last excuse for ignorance, absence of sources of information, was some time ago removed. Not a few essays and works have appeared from the pens of American and English writers, while the Germans especially have been very prolific. But the work which, as an authority on cultures,

will probably be assigned the first place is the monograph of Hueppe's above named. Within these past few years we have learned to look up to Koch and his pupils for the greater part of our light upon this very intricate subject, and Hueppe was one of Koch's most distinguished students and ardent disciples.

The book has within a very short time gone through three editions in German, and the present rendering into English will be most welcome to many who were unable to use the original. After a brief introduction, a few pages are devoted to discussion of so-called spontaneous generation and of the principles of sterilization. Then the biology and morphology of bacteria in general receive sufficient attention to permit of intelligent study of their pathogenic properties. Their detection, staining, preparation, etc., all receive due attention. The various culture methods are described with explicit care; inoculations also, with culture or diseased fluids, by inhalation, by feeding and by injection. General biological problems, such as enzyme, ptomaïnes, disinfection, action of varying temperature and atmospheric pressure, effect of electricity and light, phosphorescence, are dealt with in a most felicitous and instructive manner. Special investigations of air, water and soil are considered, and the work is brought to a close by a short chapter on bacteriology as an object of instruction.

As a whole, the book, written at Prof. Koch's request, reflects credit on the master's choice of author, and is one which no student of pathology can afford to be without. The translation seems to have been most acceptably made.

Electricity in Medicine. By Ambrose L. Ranney, M. D. Pp. 147. New York: D. Appleton & Co. 1885.

That Dr. Ranney is an indefatigable worker is shown by the several volumes which he has already put before the profession. His chosen present field of neurology is the gainer in that he is so good an anatomist, since no one factor is so potent in the diagnosis of nervous affections as sound anatomical knowledge. The present brochure is but the precursor of much larger work, and deals with the varieties of electric currents, their production, physical and physiological characteristics, with concise and valuable practical suggestions concerning their uses in medicine. The book will bear very

favorable comparison with the much larger treatises on the same subject which claim that electricity will cure everything. The three natural divisions of the general subject—electro-physics, electro-diagnosis and electro-therapeutics, receive proportionate consideration. For the practitioner who wants brief directions where to put the positive pole and where the negative, this is the book. Illustrations are abundant, and several plates at the end indicate the motor points on all parts of the body surface.

THE YEAR BOOK OF TREATMENT FOR 1885. Pp. 316. Philadelphia: Lea Bros. & Co. 1886.

As is well known, Lea Brothers publish each year a small volume giving the main features of the previous year's work. The present volume sustains the reputation of the preceding issues, and certainly the reputation of the men whose names constitute the list of its contributors should be a guarantee of its accuracy and excellence. Any book which can reckon among its writers such men as Brunton, Bryant, Harrison, Ralfe, Sansom, Treves and Walsham may be counted a good investment. We know of nothing of the same scope so compact as this.

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THE LEGAL STATUS OF MEDICAL PRACTITIONERS.

By Ansley Wilcox, A. B.
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[Read before the Alumni Association Feb. 23, 1886.]

The paper which I shall read to-day is in part a lecture prepared for my regular course on medical jurisprudence, and it has several birth-marks indicative of its origin. I shall merely attempt to condense into the time allotted to me some useful information in regard to the legal status of medical practitioners, including their rights and obligations with reference to one another, to their patients, and to the public.

In order to get a complete comprehension of the legal status of a medical practitioner in New York, one must go first to the principles of the common law of England and America. These, in the absence of statutes, define and regulate all such matters. Next, it is necessary to examine critically the successive statutes which have been passed from the year 1813, the date of what are called "The Revised Laws of New York," down to the present time, especially regulating the practice of physic and surgery, and conferring certain privileges and powers upon medical and other colleges and societies. These statutes, like most of the statutory enactments in this state, have been adopted from time to time to accomplish temporary purposes and to meet the pressure of temporary public demands, with very little reference to what had gone before them, and they are now in an exceedingly confused and unsatisfactory state.

In connection with these statutes, one must examine a very considerable body of legislation relating to the public health, which directly or indirectly imposes upon medical men various obligations and duties to the public, such as the registration of statistics and guarding against contagious and epidemic diseases. Finally, it is necessary to look into the provisions of the criminal law. In this state these are now embodied in the single statute passed in 1881, and called "The Penal Code."

I shall follow this order as closely as I can in presenting the subject to you.

The profession and practice of medicine may be regarded from a legal point of view in two entirely distinct lights. One of these would make it merely an ordinary trade or avocation like that of any business or laboring man, which all persons are free to enter upon and to prosecute for their own advantage, unrestricted, so long as they do not transgress the ordinary provisions of the criminal law, and thereby injure or endanger the lives, health or property of others. This is what is called the free medicine theory. It regards the physician or surgeon merely as a skilled laborer. It has its justification in the proposition that all men should be at liberty to make contracts for themselves, and that the responsibility for making proper contracts and employing proper persons to perform skilled labor for him should be thrown upon the individual, just as it is in the case of unskilled labor. The other theory regards the practice of medicine and surgery as differing from ordinary trades and avocations in that it has a close connection with the public health and public morals, and also in that the contract which is made between the physician and his patient is not always, nor even ordinarily, one in which the two parties act with equal knowledge of the subject matter, or with equal opportunity to look out for their own interests. Upon this theory the state takes a hand in the licensing of persons to practice medicine and surgery. It prescribes certain standards and requirements which must be complied with, and forbids unlicensed persons to practice. It sometimes goes further and prescribes minute regulations as to the relations of physicians with their patients and with others. Under the former of these two theories, medical practitioners can not be said, in the pro-

per sense of the word, to have any legal *status* at all. Under the latter theory, the collective rights and duties which the law expressly or impliedly confers and imposes upon them, together make up the legal status of the profession.

Going back to the earliest times, we find that the public in its corporate capacity, has undertaken to regulate and control the practice of medicine. We read of the ancient Egyptians that "the physicians have a public stipend and make use of receipts prescribed by law, made up by the ancient physicians. And if they cannot cure the patient by them, they are never blamed. But if they use other medicines they are to suffer death, inasmuch as the lawgiver appointed such receipts for cure as were approved by the most learned doctors, such as by long experience had been found effectual."[1]*

Under the civil law of Rome, physicians, like lawyers, were a special class, and were awarded a high social and personal distinction. Their position was in the first place regulated by custom. They were chiefly men of wealth, culture and high position, who studied and practiced medicine either from philanthropy or for the sake of the distinction and power which it gave them, and not primarily for the sake of a pecuniary gain. For this reason, the original notion of the civil law was that a physician did not and could not contract with his patient to serve him for pay; but the patient was expected to present to his physician a gratuity or gift. The relation was what is called in the civil law a *mandatum* or *mandate;* that is, a gratuitous employment of a person to perform special services. Yet the custom of giving this gratuity or present grew to be so fixed that although a physician was never permitted, in the Roman law, to sue his patient in the ordinary form of action (*quantum meruit*) for the value of his services, he was given a special action (*quasi ex contractu*) as upon an implied promise to pay the customary gratuity.

In the English common law, the notions of the civil law of Rome were curiously mingled with customs and usages entirely different from those of Rome, and produced some strange results. The legal status of physicians under the English common law was affected in this way. It has always been the fundamental doctrine

*1 See Notes at end of paper.

of the common law, both in England and America, unless modified by statute, that the practice of medicine and surgery is free and open to all men, like any trade or business. There was not in England, until created by statute, any class of physicians like that which existed at Rome, and no such special reasons existed for making the services of medical men gratuitous. Yet the English courts imported the Roman doctrine that the services of physicians were gratuitous, and declined to give them any legal remedy against their patients for the recovery of compensation in the absence of an express contract.[2] They failed to bring in with this the special technical doctrine of the Roman civilians which I have alluded to, creating an implied contract to pay the customary emolument. To this doctrine of the English courts, although it is now changed by statute, is due the present custom among English medical men of receiving a fee for each professional visit or consultation on the spot, and of making no charges against their patients.

In this country, however, the peculiar provision of the English common law which regarded the services of medical men as purely gratuitous, has never been adopted.[3] Independently of all statutes, it is the common law of America, on the one hand, that all persons who choose are free to practice medicine and surgery; and on the other hand, that they can recover the value of their services, provided they have any value. This recovery may be based upon an express contract, if one has been made; or if no express contract has been made, it is based upon the actual value of the services, in ascertaining which, the usage and custom of physicians in charging for similar services, is entitled to great, if not controlling weight.

We will take this, then, as the starting point for ascertaining the legal status of medical practitioners in this state and in this country at present: That in the absence of special statutory regulations, the practice of medicine and surgery in any of their branches is entirely free; that medical men may make any contract with their patients which is not fraudulent or unduly oppressive, and that in the absence of contract they may recover at law the actual value of their services. We shall see hereafter how this general doctrine has been modified in New York by legislative enactments.

No physician is required to practice promiscuously, nor to ex-

tend his services to any particular patient unless he desires to do so. He can absolutely refuse, under any and all circumstances, to undertake the treatment of the case, no matter what claims it may make upon his humanity nor what the results may be to the patient. He may even exercise this privilege of declining to treat a case where the patient is one who has been his regular patient in the past; and he need give no reasons at all for his refusal. The only exception to this proposition would be in those rare cases where a physician has contracted to render all necessary medical services to an individual or to a family for a definite period of time.

If the physician does assume the charge of a patient he may make any contract in regard to the amount of services to be rendered, the charges for his services, the time they are to cover, and the results to be obtained, which the patient will freely and intelligently assent to. He may make an absolute contract to render all necessary medical services for a definite time and at a fixed price. He may contract to attend a patient during a definite illness, with or without fixing any price for his services. He may, if he chooses to do so, guarantee a favorable result of his treatment, or make his compensation conditional upon obtaining a successful result. The law thus gives to your profession the greatest liberty of contract, subject only to the ordinary restrictions which are thrown about all contracts, that they shall be made fairly and intelligently by both sides. No physician in making such a contract would be permitted to take any advantage of his patient by misleading him as to the seriousness of his disease or its probable continuance, the chances of recovery, or the amount of labor and skill which would be required to be expended. If he should deceive his patient in any of these respects, or in respect to any matter which was especially within his own knowledge, it would be sufficient to avoid the contract. On the other hand, if the patient, in making a contract with his doctor, should intentionally mislead him as to his physical condition, the contract would be voidable. There is only one absolute limitation which in my opinion the law would put upon contracts of this kind, and that is that a physician would not be permitted to make a contract with his patient exempting himself from liability for his own negligence. He may protect himself against lack of skill by frankly informing the patient

that he does not feel equal to the treatment of the disease, or certain that he understands it; but he is bound to use the best knowledge and the best skill which he has, and he cannot exempt himself from this obligation. He is bound to give his patient at least ordinary care and attention, and from this obligation also he cannot free himself.

Ordinarily, however, no written contract and no express contract at all is made between medical practitioners and their patients; and in this case the law undertakes to define and regulate the rights and duties of both, on the basis of an implied contract. After the physician has taken charge of the case, he is at liberty to leave it at any time upon giving the patient reasonable notice and a reasonable opportunity to supply his place. If his place cannot be supplied, he will be bound to attend the patient through the illness. If he fails to give a reasonable notice, or insists upon deserting the patient when no substitute can be found, he is liable in damages for the results which may follow. This is true, even though the patient may be a charity patient and the services may be gratuitous.

On the other hand, the patient is always at liberty to dismiss his physician at any time without notice and without assigning any cause; but, in this event he is bound, unless he was a charity patient, to compensate the physician for his services up to the time of the dismissal. The relation is one of personal trust and confidence. The law recognizes the fact that if the trust and confidence of the patient is destroyed, no matter how unreasonably or unjustly, the relation must thereafter be unprofitable to both parties, and it therefore gives to the patient this absolute privilege.

Where there is no express contract, and subject to this reciprocal right to terminate the relation, the implied contract between the physician and patient may be subdivided as follows:

The physician contracts—

(1) To use the necessary care and attention.

(2) To exercise the necessary skill.

(3) Under some circumstances to furnish the necessary and proper medicines. This obligation only exists where the custom is for physicians to furnish their own medicines instead of writing prescriptions to be filled out by apothecaries; but in any case where

the physician actually does furnish medicines, he assumes a responsibility to his patient that the medicines are proper and suitable.

The patient contracts—

(1) To give his physician opportunity to treat him properly, and for this purpose to give him full information as to all essential facts.

(2) To obey his instructions and carry out his directions.

(3) To pay him the value of his services.

The different branches of this contract are reciprocal. Either party who is in default cannot complain of the other, or prosecute any remedy against him. For instance, if the physician fails to use proper care or to exercise proper skill, he cannot recover for his services. If the patient fails to afford an opportunity for proper treatment or to obey instructions, he cannot in general complain of the result. He can neither avoid his obligation to pay, nor claim any damages from the physician for the result—even of actual negligence or inattention on the part of the physician, if the fault of the patient himself contributed to the result.

This last proposition may be subject under peculiar circumstances to some qualifications; for if by the improper treatment of an injury by a surgeon the patient must inevitably have a defective limb, the surgeon would be liable to an action for damages, even though the mismanagement or negligence of the patient himself or of others may have aggravated the damage and rendered the ultimate condition of the limb worse than it need have been. In such a case, the negligence of the patient would at the most go to mitigate and diminish the damages for which the practitioner would be liable. The latter would be regarded as a wrong-doer absolutely, and the subsequent and independent wrong-doing of his patient would not excuse him from the necessary results of his own acts. A physician or surgeon is bound not only to treat his patient with proper skill and care, but to give him all necessary instructions as to his actual condition and the manner in which he should treat himself; and if he misleads the patient or fails to give him such instructions, then the failure of the patient to take proper care of himself would be no excuse to the practitioner, but the results of such a failure would be directly attributed to the practitioner.[4]

As a consequence of the reciprocal character of the obligations

of physician and patient, it follows that if the patient pays, or if the physician recovers in an action, the fees for his services, it bars a subsequent action by the patient for damages, except for such damages as could not then have been known. A voluntary payment by the patient, or an adjudication in an action against him, is held to be conclusive evidence that the services were properly rendered, and were of value, so that the patient could not thereafter claim the contrary. On the other hand, if the patient sues his physician, and recovers damages for malpractice or neglect against him, the physician would thereafter be precluded from claiming any fees.

As to the amount of compensation which a medical practitioner may claim and recover, in the absence of any contract fixing it, this will be determined by the actual value of his services, having regard to the character of the disease, the amount of time and labor expended upon it, and the skill and experience of the physician himself.[5]

There is very respectable legal authority for the proposition that a physician is entitled, in charging for his services, to regard the worldly condition and wealth of his patient; in other words, that for the same services it would be proper to charge a Vanderbilt or a Rothschild more than a patient of ordinary means. I cannot convince myself that this is either good morals or good law. To my mind it savors strongly of extortion. It can require no more skill or ability to furnish medical advice and attention to a millionaire than to another person. A physician is, of course, completely at liberty to establish a standard of charges as high as he pleases, and he may make it so high that none but millionaires will be able to employ him. No one can object to this. If, then, he does give professional attention to a person who is unable to pay such fees, and chooses to charge him at a lower rate than his custom would warrant, this, also, would be a simple act of charity to which no one could object. But for a doctor deliberately to add to his usual rate of charges an amount based simply upon the supposed ability of his patient to pay, seems to me to be lowering your profession to the level of soulless usurers, and sacrificing all that is high and noble and philanthropic in it to the mere love of lucre. I do not know

that the precise question has ever been presented in this country, but I doubt very much whether our courts would sanction any such practice.[6] Of course, if a man of wealth chooses to promise his medical attendant unusual fees as an inducement to special efforts, whatever professional ethics might think of such a contract, it would be valid.

There is another class of cases, similar to this, but which presents a clear distinction. That is where a physician is called upon to attend a person of public station, whose life and health are of great importance to the world. Such was the case of the medical attendants upon President Garfield, and, more lately, upon ex-President Grant. In such a case, in addition to his ordinary professional cares, a physician must feel the burden of the extraordinary responsibility, owing to the importance which will attach to the result of his labor, and the criticism to which he will be subjected in any event. I think that clearly upon legal, as well as moral, principles, a physician is entitled to receive additional compensation based upon this unusual responsibility.

Aside from all such extraordinary cases, the compensation of physicians is usually and properly fixed by custom. If the physician has a custom of his own which is known to his patients through his previous charges or in any other manner, every employment would be presumed to be based upon such a known custom. The physician would not be permitted to charge more, nor would the patient be allowed to pay less than the amount so impliedly agreed upon. Even where the special custom of the physician is not known to his patient, as where a consulting physician, for instance, has a fixed charge for each consultation, his customary fee, although not binding upon his patient as making an implied contract, would be almost conclusive evidence of the value of his services. Where a fee bill has been adopted by the medical society of the district, or by the medical fraternity in general, such a fee bill if known to the patient would be presumed to be the basis of each contract of employment so as to make an implied contract on the one hand to charge and on the other hand to pay the fees so regulated; though this would give way to the special custom of any individual practitioner to charge a larger or a smaller sum, if known to the patient. Where

such a fee bill is not known to the patient it cannot be considered as making part of the contract of employment, but would simply furnish, in the absence of other or special circumstances, a *prima facie* standard of charges, which either side would be at liberty to prove were too much or too little.

A very important question for physicians in connection with this subject of their compensation is as to who is liable to pay them, in cases where their bills are not voluntarily settled. This question arises in connection with services rendered to infants and married women; to persons who are intoxicated and insane, and in cases where the services are rendered to a financially irresponsible patient, but at the request or procurement of a person who is reponsible. I cannot attempt to go into all of these questions in detail, as they practically involve almost the whole of the law of domestic relations and of suretyship; but a few suggestions will serve to make the matter clear enough for ordinary purposes.

A patient who receives the services of a medical attendant and profits by them is himself or herself presumptively liable to pay for them, although the physician may have been called into attendance by another person.[7] Even though some other person may have guaranteed the bill or contracted in any manner to pay the physician, it will be presumed that the patient himself is also liable, and nothing less than a distinct understanding that he was not to pay, or that the services as to him were gratuitous, will absolve him from this obligation. This is the rule as to all persons who are at liberty to make contracts; that is, as to all adult persons of sound mind. It applies equally to men and to women, whether married or single. In the case of a married woman, under our statutes in this state her separate estate is impliedly liable upon such an obligation.[8]

The husband of a married woman is responsible for her debts if contracted with his knowledge, or if contracted without his knowledge, provided they are reasonable and proper. He would, therefore, be liable to pay for her proper medical attendance under all circumstances, whether she is also capable of responding or not.[9] On the other hand, a married woman, whatever her financial ability, is not bound to support her husband to the extent of paying his debts under ordinary circumstances. If, therefore, the husband is irre-

sponsible, the wife cannot be made to pay for his medical attendance, except upon the basis of some express contract or of an employment directly by her.

A father is bound to support his children until they arrive at majority, and is liable for their reasonable and proper debts. This would, of course, include their obligations to medical attendants.[10] The mother is under no obligations as long as the father is alive; and even after the father's death, no legal obligation is imposed by the common law on the mother to support her children and pay their debts, except under unusual circumstances, so that it amounts to very little as an ordinary reliance.[11] After children arrive at their majority, the legal responsibility of their parents for their debts ceases. Of course the children are in no event responsible for the debts of their parents.

But infants themselves are not wholly deprived of their power to contract valid obligations, and their responsibility for services rendered to them. The general incapacity of infants (*i. e.* minors) to assume legal obligations is a protection which the law throws about them for their own benefit, to prevent them from being imposed upon. There are certain classes of contracts which they can make, and upon which their own estate, if they have any, is liable. These in general include contracts for necessaries, such as clothing, food, shelter and education. Under this head would come all reasonable and proper medical attendance; so that a physician, if employed directly by the infant, and if there is no adult person who can be made to pay for his services, may always resort to the infant himself if he has any property.

This last rule applies for similar reasons to all persons of unsound mind, and who in general have not capacity to assume obligations by contract. All such persons may contract for necessaries of every kind, and after they have received the property of other persons, or have had the benefit of services rendered in any way which was actually proper and necessary for their well-being, they can be made to pay at reasonable and proper rates.

As between master and servant, the master assumes certain obligations to the servant, if a domestic, to care for the servant and furnish medical attendance during illness; but this is not an obligation

which any other person can enforce. In general, therefore, the master is not responsible for medical services rendered to the servant, unless the employment came from him directly.

Finally, there is a great variety of cases covering all of the intimate relations which have been referred to and extending beyond them, in which the question is raised of the liability of one person to pay for medical services rendered to another, where the former employed a physician, or has guaranteed that he should be paid. In regard to all of these cases, the most important point to be noticed is, that there is a radical distinction between a direct employment of the physician by A for the benefit of B, and a case where A simply guarantees that B will pay for the services to be rendered to him. In the latter case, of a guarantee, there is a statute which has existed in England for 200 years, and is a part of the statute law in all, or nearly all, of the American States, to the effect that no promise to answer for the debt, default or miscarriage of another shall be binding, unless made in writing. This is a part of what is called the Statute of Frauds. It applies to all cases, whatever the form of the undertaking, where it is in substance a collateral agreement to pay a debt which is primarily the debt of another person. This statute, however, does not apply in any case where the promisor undertakes to pay for services absolutely, and without regard to the obligation of the person receiving the services. In such a case it is not an undertaking to answer for the debt, default or miscarriage of another person, but it is the original creation of a debt by the person who makes the promise, and it need not be in writing.

Keeping this distinction between an original promise and a guarantee in mind, it will be plain that a guarantee which must be in writing can hardly give rise to controversies or to very difficult questions. But in the case of an original employment of a physician by one person to render services to another, very difficult questions arise in regard to the responsibility of the former. In general it may be said that where there is any *moral* obligation on the part of the person employing a physician to care for the patient, the law will be more quick to construe his acts in calling in a medical attendant into an undertaking to pay for the services to be rendered.

This will be the case where they are members of the same family or household, or have any intimate personal relations.[12] In the absence of such special relations, the mere fact that one person calls upon a physician to attend another would not create any obligation on the part of the former to pay for his services.[13] Nothing less than an express agreement to do so would have this effect. The agreement, as already stated, need not be in writing; but I suggest to you, as a matter of precaution, that where you are called upon in this manner by a person who is not known to you, it is very unsafe to rely upon anything less than a written employment.

Where a patient dies, a physician's bill is a legal claim against his estate, and in some states where the patient is insolvent it is given priority over other debts. It should be presented promptly to the executor or administrator, so as to be passed upon while he has funds in his hands.

In the case of consulting physicians,[14] if their employment was expressly authorized by the patient, the latter will, of course, be liable to pay them; but in the absence of express authority, the attending physician has implied authority to call in a consulting physician, where it is actually necessary, and to a reasonable extent. If the patient receives his visits, and profits by his advice willingly, he will ratify the employment, and will, of course, be liable as if the employment had been originally authorized. Such assent would be presumed from his not objecting, if he is in a condition to appreciate what is going on. Yet, in case the bill of a consulting physician is disputed, it would be necessary to prove, in the absence of express authority, both that his employment was at least proper, if not necessary, and that he was only called in to a reasonable extent. If, in any case, the consulting physician should be unable to recover from the patient by reason of the want of authority of the attending physician to employ him, then, upon ordinary principles, the attending physician himself would be liable for his bill; for it is a general principle of the law of agency that an agent is held to warrant his authority, and if a recourse to the principal is denied because of the agent's lack of authority, the agent is himself liable.

We come now to the degree of care and skill which medical practitioners are legally required to exhibit and use.

In the first place it should be stated that the physician is expected to practice according to the tenets of the school to which he belongs. The law in general does not recognise any distinct schools or classes of physicians.[15] In this state, under our present statutes, it would be perhaps more correct to say that the law *does* distinctly recognize *all* special schools and classes, but the result of either statement would be the same. If a man knowingly employs a physician who belongs to one school, the implied contract is that he shall be treated according to the beliefs and practice of that school, in so far as it has any special tenets or system of practice. He may employ an allopathist or homœopathist, an eclectic or electric doctor, an herb doctor or a horse doctor, if he pleases, and has a right to expect the kind of treatment which the profession of the person employed would lead him to anticipate. One of the most venerable witticisms of the law is connected with this subject. Puffendorf, in his "Law of Nature and Nations," says: "We read a pleasant story of a man who had sore eyes and came to a horse-doctor for relief. The doctor anointed his eyes with the same ointment he used among his horses, upon which the man falls blind, and the cause is brought before the judge, who acquits the physician. For if the fellow, says he, had not been *an ass* he had never applied himself to a horse doctor."

It may be stated as a general proposition that every professional man holding himself forth as specially instructed in some branch of science or art, and publicly announcing himself as a practitioner of the same, impliedly agrees to bring to the discharge of his duties the *ordinary skill of his profession.*[16] This is the lowest standard of capacity tolerated by the law.

Chief Justice Tyndall said (Lanphier vs. Phipos, 8 Carr. and Payne, 478), "Every person who enters into a learned profession undertakes to bring to the exercise of it a reasonable degree of care and skill. He does not, if he is an attorney, undertake at all events, to gain the cause, nor does a surgeon undertake that he will perform a cure; nor does the latter undertake to use the highest possible degree of skill, as there may be persons of higher education and greater advantages than himself; but he undertakes to bring a fair, reasonable and competent degree of skill. And in action against him by a

patient, the question for the jury is whether the injury complained of must be referred to a want of proper degree of skill and care in the defendant, or not. Hence he is never presumed to engage for extraordinary skill, or for extraordinary diligence and care.

"As a general rule he who undertakes for a reward to perform any work is bound to use a degree of diligence, attention and skill, adequate to the performance of his undertaking; that is, to do it according to the rules of the art, *spondet peritiam artis.* And the degree of skill rises in proportion to the value and delicacy of the operation. But he is no case required to have more than *ordinary skill*, for he does not engage for more."

This statement is really a complete summary of the law upon this subject, which has been reiterated in different forms and under different circumstances in a great variety of cases. Nothing would be added by repetition. It covers both the question of the skill, and of the care and diligence which is required of practicing physicians and surgeons. In regard to both of these things, the doctrine is, in a word, that practitioners are expected to use at least an ordinary degree of care, and to exhibit an ordinary amount of skill in all cases.[17] The standard will vary with the difficulty and complication of the case, and also with the advance of medical knowledge upon the subject.[18] It is always a question of fact whether or not the physician has in a given case used that degree of care, and displayed that amount of skill which might reasonably be expected of a man of ordinary and average diligence and professional ability. Such questions of fact in an action at law are left to be decided by a jury, whether the action is brought by the physician to recover for his services, or by the patient to recover damages for malpractice or neglect. Of course, it is true, as already stated, that a physician may, by an express contract, assume an entirely different obligation. He may guarantee the recovery of his patient, or some particular result; but in the absence of an express contract, no guarantee is presumed, and the unsuccessful result of treatment is never conclusive evidence that the treatment has been in any way defective.

It is sometimes held that a medical degree, diploma or license to practice, issued by a medical college or board authorized to examine

and license physicians is *prima facie* evidence of the *possession* of at least ordinary skill and ability. Such a degree, however, never can be considered as conclusive upon a controversy of this kind.[19] The only other evidence which can practically be given is that of persons skilled in medicine or surgery, as the case may be, whose opinions are submitted to the jury to establish whether or not the treatment was proper, and the amount of care which was given to the case was sufficient.

Even where a physician undertakes to render services gratuitously he is liable to his patient in damages for either malpractice or neglect.[20] This is true whether the individual is a private patient treated gratuitously as a matter of charity, or he is treated in a hospital. Under all circumstances, if the medical practitioner assumes to take charge of a case, whether with or without the expectation of reward, he must bring to the task that ordinary degree of skill, and must use that ordinary amount of care which the law exacts as a minimum requirement.

As already stated, if the practitioner fails either in respect of the skill or care which he exhibits, he can recover no compensation, and he is also liable to his patient in damages. The damages will depend upon the special features of each case. In general, they embrace the actual pecuniary loss of the patient, including the expenses to which he has been put, and the loss of time during his illness, and his pain and suffering in so far as this results from the physician's malpractice or neglect. He is also permitted to recover for the pecuniary damage, pain and suffering to which he will be subjected in the future, in so far as these can be estimated. If the patient dies by reason of malpractice or neglect, in this state and in most other states, a special action for damages is given to his personal representatives to recover for pecuniary injuries done to the heirs or next of kin. In this case the amount of the recovery is generally limited to some specific sum. In New York the limit thus fixed is $5,000.

In connection with the committing of insane persons to asylums, the physician who certifies to the insanity of an individual assumes a responsibility to him which may be enforced in an action for false imprisonment. He is not, however, absolutely responsible for the

correctness of his conclusions that the individual is insane. He would be liable to such an action if he should fraudulently and maliciously issue a false certificate, knowing it to be false. Beyond this, he would probably be liable if he should issue such a certificate honestly but ignorantly, and in a case where ordinary skill and experience in detecting insanity should have led him to the opposite conclusion. In this instance, and in all instances of medical malpractice, while willful and deliberate wrong-doing will, of course, involve liability, and will in all cases be considered a reason for giving aggravated damages, they are not essential ingredients of the claim for damages. The most perfect honesty, and the best of intentions will not protect the practitioner, if he fails to act up to the required standard of skill and care.

I have in a previous lecture, in connection with the subject of expert testimony, spoken of the intimate and confidential relations which exist between the physician and his patient, and the obligation of secrecy which is imposed upon the former. It is a part of the patient's duty to make a full and fair disclosure to his physician of all material facts bearing upon his illness. On the other hand, the physician assumes a legal, as well as a moral obligation, under no circumstance to disclose such facts, without the patient's express consent. I do not know that an attempt has ever been made to prosecute any remedy against a physician for making such a disclosure. But, undoubtedly, if substantial damage to the patient should follow, the law would give him a remedy. No such disclosure can be made in the courts of justice in this state, for the reason that the statute expressly prohibits a practicing physician or surgeon from disclosing any information acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity, unless the patient himself is present and expressly waives the prohibition.[12]

So far I have been considering the status of medical men upon general principles, and without reference to the particular systems of licensing practitioners which have been, and are, in vogue in this state. A brief reference to the particular features of our statutory law will complete the subject.

Recurring to the distinction made at the beginning of this lecture

between the system of free medicine and the system of licensing and restricting medical practice, we shall see that the state of New York has at different times adopted and used each of these systems, and has combined them in various ways.

The revised laws of 1813 provided for the creation and incorporation of medical societies in each county of the state, to which was intrusted the examination and licensing of physicians and the regulation of medical practice. They also provided for the continuance of the then existing "Medical Society of the State of New York," which is in effect a consolidation of all the county societies, and which is made a corporation. These laws as amended and embodied, in part, in the Revised Statutes of 1828, made it compulsory upon every physician and surgeon to be admitted into the medical society of his county, and provided a machinery for compelling him to apply for admission, and also for rejecting or expelling individuals against whom charges of gross ignorance, professional misconduct or immoral habits should be made.[22] In case an applicant for a license was rejected by the county society an appeal was given to the Medical Society of the State.

Under this system it was expressly provided (R. S., Part 1, Ch. 14, p. 454, Sec. 16), that "no person shall practice physic or surgery unlesss he shall have received a license or diploma for that purpose from one of the incorporated medical societies in this state, or the degree of Doctor of Medicine from the Regents of the University, or shall have been duly authorized to practice by the laws of some other state or country, or have a diploma from some incorporated college of medicine or regularly incorporated medical society in such state or country." In case of his having such foreign authority to practice, he was required to obtain a license from the censors of the state Medical Society. It was expressly provided (Sec. 21) that "the degree of Doctor of Medicine conferred by any college in this state shall *not* be a license to practice physic or surgery." The unlicensed practice of medicine, which was forbidden by this act, became a misdemeanor, and (Sec. 22) it was expressly provided that no person practicing without a license could recover any compensation for his services.

This system placed the entire control of the examination and

licensing of physicians in the hands of the county and state medical societies.

In 1844 an entire reversal of this state policy was enacted in a statute (Chap. 275, Laws of 1844) which in effect created a system of entirely free medicine. It repealed all previous laws prohibiting unlicensed physicians from recovering fees, and provided that no person should be liable to any criminal prosecution for practicing physic or surgery without a license, except in cases of malpractice or gross ignorance or immoral conduct. It put unlicensed practitioners on exactly the same basis with those who were licensed. As to all physicians, it provided that they could be convicted of gross ignorance, malpractice or immoral conduct as a criminal offense, and could be punished by the state in addition to being liable to a private action for damages.

I do not know whether an indictment for gross ignorance or immoral conduct or malpractice under this statute was ever found; but it seems to be a most extraordinary, loose and ineffectual provision of the criminal law. There is nothing so necessary to a criminal statute as that it should be definite and certain.

In 1857 the legislature passed an act allowing the homœopathic physicians in each county to organize a Homœopathic Medical Society, to have all the powers, rights and privileges, and be subject to all the duties and responsibilities which had been given to, or imposed upon, the existing county medical societies.

In 1872, the state began to recede from the system of free medicine which had been inaugurated in 1844. In this year, 1872, and again in 1874 and in 1880, and by the Penal Code of 1881, new and stringent provisions have been created for the examination and licensing of physicians to practice. (L. 1872, C. 746; L. 1874, C. 436; L. 1880, C. 513; Penal Code, Sections 356, 357, 200, etc.)

The law of 1872 provided for an examination of candidates for medical degrees by boards of examiners appointed by the Regents of the University of the State of New York. The regents were given the power to confer the degree of Doctor of Medicine, which degree was made a license to practice physic and surgery, but there was no prohibition of unlicensed practicing.

The law of 1874 required every practitioner of medicine or

surgery in the state, except licentiates or graduates of some medical society or chartered school, to obtain a certificate from the censors of some of the medical societies within a specified time. This statute declared it to be a misdemeanor for any person to practice medicine or surgery unless authorized to do so by a license or diploma, legally obtained from some chartered school, state board of medical examiners or medical society.

The law of 1880 provided that no person should practice medicine or surgery, unless he had been previously authorized so to do or was thereafter authorized so to do in accordance with the Laws of 1872 (that is, after examination by the Regents of the State University), or by the subsequent sections of this act. It required every practicing physician and surgeon to register his license or diploma in the county clerk's office, and to verify it by affidavit. It required that physicians and surgeons coming from without the state should have their diplomas certified by some *medical college* or *medical school* of this state, before being authorized to practice. It further provided that the degree of Doctor of Medicine lawfully conferred by any incorporated medical college or university of this state should be a license to practice physic or surgery, after registration of the same. It then declares that any person who violates this act shall be guilty of a misdemeanor, and shall be punished by a fine, one-half of which goes to the person making the complaint, and the other half into the county treasury, and by imprisonment.

This act seems to take away from the medical societies of the state, and of the several counties, the power to license practitioners and to certify foreign diplomas, which powers had been conferred by the Laws of 1874. It apparently restricts the power to issue licenses to the Regents of the State University and to incorporated medical colleges and universities; yet the act of 1874 was not expressly repealed, and still stands on the statute books.

Finally the Penal Code, enacted in 1881 (Sec. 356), declares that "any person who practices or attempts to practice medicine or surgery unless authorized so to do by a license or a diploma from some *chartered school, state board of medical examiners or medical society*, or who practices under a license or diploma illegally or fraudulently obtained, is guilty of a misdemeanor, and is punishable by fine and

imprisonment." This statute, entirely ignoring the act of 1880, again, by implication, confers upon medical societies the power to issue licenses, and re-affirms the power of boards of medical examiners appointed by the Regents of the University. It also confers this power upon "chartered schools," but says nothing about "incorporated medical colleges or universities." I suppose that the words "chartered school" so used in the Penal Code, would be held to include medical colleges and universities, but the language is exceedingly inapt, and is a specimen of the most vicious kind of legislation.

It is, therefore, now the law in this state, that the practice of medicine and surgery is unlawful, and is a criminal offence, unless the practitioner has a license from some duly authorized body, and registers his license in the manner required.[23] It is also the law that all practitioners must become members of one or the other of the county medical societies.

No statute now in existence expressly declares that a person practicing medicine without a license shall be unable to recover compensation for his services. The provision to this effect in the Revised Statutes, which was repealed in 1844, has never been re-enacted. But it is a very clear legal principle that any person unlawfully engaged in carrying on such a practice would be unable to predicate any legal rights upon what he did, and would be incapable of recovering any compensation at law.

It follows that all of the principles which have been stated to you at length as governing the legal rights and obligations of medical practitioners only apply to such persons as are now duly authorized to practice. All other persons, in so far as they hold themselves forth as physicians and surgeons, are in the eyes of the law simply criminals.

In addition to the civil liability of medical practitioners which has been explained at length, there are some provisions of the criminal law which should be stated to you.

It is provided in the Penal Code (Sec. 357) that, "A physician or surgeon, or person practicing as such, who, being in a state of intoxication, administers any poison, drug or medicine, or does any other act as a physician or surgeon, to another person by which the

life of the latter is endangered or his health is seriously affected," is guilty of a misdemeanor. In another section (Sec. 200) it is provided that, if he does any of these things "without a design to effect death," but *does produce death*, he is guilty of manslaughter in the second degree. Of course, if he did any of these things with the design to effect death, he would be guilty of murder.

The Penal Code also provides in the most explicit terms that no person shall commit an abortion, or do any act or give any advice tending to the commission of an abortion or procuring a miscarriage upon a pregnant woman, unless it is absolutely necessary to preserve the life of the woman (Secs. 190, 191, 294, 297). The penalty for this offense is graded according as the child was quick or not, and according as the result of the crime is or is not fatal to the mother. It is also made a crime for any person to be engaged in manufacturing, selling or giving away any instrument or drug or other substance intended to be used in procuring a miscarriage or abortion. It is also made a crime for any person or individual to conceal the birth of a child by any disposition of the dead body of the child, whether it died before or after its birth.

There are also provisions in the Penal Code, and in other statutes, in regard to the preparation of medical prescriptions which involve poisons, and the sale of poisonous drugs by apothecaries and others, which require them to be registered and labelled distinctly in all cases. (See Penal Code, Sections 401–405, Laws of 1860, Ch. 442; Laws of 1869, Ch. 478.)

I have already referred to the fact that there are in this State elaborate provisions of law relating to the public health. It would be impossible here to give even the briefest analysis of these statutes. They are all of importance for physicians, and should be carefully studied and understood by every member of the profession. The principal result of these statutes is to establish a State Board of Health (Laws of 1880, Ch. 322), which has broad powers and extensive duties in regard to the registration of vital statistics, the prevention of infectious diseases, and other kindred matters. Generally the municipal charters of our principal cities create local boards of health, with similar powers and duties within their territorial jurisdiction. All of these boards have power to make rules

and regulations which are binding upon physicians practicing within their jurisdiction, and which are, of course, of the greatest importance.

NOTES.

[1] Diodorus Siculus, Lib. 1, Cap. 6, quoted in Ordronaux on the Jurisprudence of Medicine, p. 9.

I must acknowledge my obligations to this work of Dr. John Ordronaux for many suggestions which have been of value in the preparation of this paper. Although published in 1869, and therefore in some respects inaccurate in its statements of statutory law, it is still a valuable book of reference. It is the only work, which I know of, professing to treat exhaustively of the legal status of medical practitioners in this state. Another valuable work, covering a large part of the subject, is Elwell on Malpractice.

In the American Law Review, Vol. 20, pp. 80 to 92, is an article on the Civil Liability of Physicians and Surgeons, which collates a number of modern cases.

[2] Surgeons, on the contrary, were allowed to recover compensation without express contract. By statute (21 and 22 Vict., Chap. 90, Sec. 31) physicians are now allowed in England to sue for fees in all cases, with or without an express contract in advance. See 20 American Law Review, pp. 80 and 81.

[3] Adams vs. Stevens, 26 Wendell (N. Y.) Reports, 451.

[4] Carpenter vs. Blake, 75 New York Reports, 12.

[5] An account rendered by a physician is not binding upon him unless accepted by the patient, so as to become an account stated. Bronson vs. Hoffman, 7 Hun (N. Y.) Reports, 674; Ordronaux, p. 46.

[6] See Moody vs. Osgood, 50 Barbour (N. Y.) Reports, 628. Dr. Ordronaux (Jur. of Med., p. 45), seems to think that a medical man is entitled to take into account, in fixing his fees, the "rank and estate of his patient."

[7] Crane vs. Baudouine, 55 New York Reports, 260.

[8] The statute referred to is as follows (Chap. 381, Laws of 1884): "A married woman may contract to the same extent, with like effect and in the same form as if unmarried, and she and her separate estate shall be liable thereon, whether such contract relates to her separate business or estate or otherwise, and in no case shall a charge upon her separate estate be necessary."

Before this act was passed it was held that a married woman was not liable for a doctor's bill contracted for attendance upon her unless she had expressly charged her separate property with the payment. Moody vs. Osgood, 50 Barbour (N. Y.) Reports, 628.

[9] Moody vs. Osgood, 50 Barbour (N. Y.) Reports, 628; Potter vs. Virgil, 67 Barbour (N. Y.) Reports, 578.

[10] Crane vs. Baudouine, 55 New York Reports, 256.

[11] See Bigelow's Leading Cases on Torts (first edition), pp. 295–305, for a full discussion of this subject.

[12] Yet, even in a case where the patient was the daughter of the defendant, and was attended by the plaintiff, a physician, in defendant's house, and under his constant directions (the daughter being of full age and married), it was held that the father was not liable to the physician without something more to show an assumption of liability by him; in other words, an express promise to pay. Crane vs. Baudouine, 55 New York Reports, 256. See, however, 45 Howard's Practice (N. Y.) Reports, 57.

[13] Buck vs. Amidon, 41 Howard's Practice (N. Y.) Reports, 370; Crane vs. Baudouine, 55 New York Reports, 256.

[14] Crane vs. Baudouine, 55 New York Reports, at p. 262; Ordronaux, p. 50.

[15] Ordronaux, pp. 9, 86; Corsi vs. Maretzek, 4 E. D. Smith (N. Y.) Reports, 1; White vs. Carroll, 42 New York Reports, 161, 163; 20 American Law Review, 89.

[16] Ordronaux on Jurisprudence of Medicine, pp. 29 *et pass.*; 20 American Law Review, 82; Carpenter vs. Blake, 10 Hun (N. Y.) Reports, 358; same case, 75 New York Reports, 12.

[17] It is not necessary to prove gross negligence. Having engaged in the performance of services requiring skill and care, the surgeon (or physician) is liable for want of the requisite skill, or an omission to exercise proper care. Carpenter vs. Blake, 75 New York Reports, 12.

[18] It will also vary with the locality and surrounding conditions. 20 American Law Review, 84.

[19] Where the question as to whether or not a medical practitioner was possessed of adequate skill in his profession is raised by his patient in any manner, it is proper to prove that he did possess such skill by proving his medical diploma, or by the opinions of other competent persons. If he has not competent skill, he is censurable for holding himself out as possessing it, and is strictly accountable for the consequences of his acts; and having adopted a process which was not successful, to the exclusion of one which might, and probably would, prove so, he is not entitled to the benefits which would inure to the skillful practitioner from an error of judgment or mistake in the appliances and means at command of the expert. Carpenter vs. Blake, 50 New York Reports, 696; and see 20 American Law Review, pp. 89, 90.

The authorities on the subject of the effect of a license or medical diploma, and even on its admissibility as evidence, in a case of alleged malpractice, are not at all uniform. I suggest that the authorities may be to some extent reconciled, and that a correct distinction may be laid down in the following manner. A medical license or diploma should be regarded as *prima facie* evidence of the *possession* of at least ordinary medical skill; but the question in an action for malpractice is not whether the practitioner *possessed* the requisite skill, but whether he *exercised* the requisite skill. This being the question, proof like a medical diploma merely tending to show that he possessed such skill, might be in the first instance inadmissible. But if the patient by his pleadings or by his proof attempts to show that the practitioner did not exercise the requisite skill, by showing that he did not possess it, then the question would become an inquiry into the degree of skill which the practitioner possessed, and therefore his medical diploma or license would become competent, *prima facie* evidence.

[20] Ordronaux on Jurisprudence of Medicine, p. 28-31; 40 Illinois Reports, p. 209; 20 American Law Review, p. 81.

[21] The statute is as follows (New York Code, sec. 834): "A person duly authorized to practice physic or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity," (Sec. 836) "unless the provisions (of the foregoing section), are expressly waived by the patient."

This includes not only information communicated from the lips of the patient, but all knowledge acquired by the physician in treating him professionally. It is presumed that the information would not have been imparted except for the purpose of aiding the physician professionally. Edington vs. Life Ins. Co., 67 New York Reports, 185; see Grattan vs. Life Ins. Co., 80 New York Reports, 281; Edington vs. Life Ins. Co., 77 New York Reports, 564; Dilleber vs. Life Ins. Co., 10New York Weekly Digest, 180; 87 New York Reports, 79.

The privilege can only be waived by the patient personally, and not by his representatives after his death. Westover vs. Life Ins. Co., 99 New York Reports, 56.

The privilege applies to criminal actions, and protects a confession of crime. People vs. Murphy, 23 New York Weekly Digest, 42; Hunn vs. Hunn, 1 T. & C. (N. Y. Supreme Court) Reports, 499. But see Pierson vs. The People, 79 New York Reports, pp. 432–435, on limitations of application of this rule in criminal actions.

[22] People *ex rel.* Bartlett vs. Medical Society of Erie County, 32 New York Reports, 187.

[23] The statutes prohibiting unlicensed persons from practicing medicine or surgery do not apply to one who undertakes to cure diseases solely by manual treatment. Smith vs. Lane, 24 Hun (N. Y.) Reports, 632.

ALCOHOLIC PARALYSES.

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Considerable attention has for a long time been given to the cerebral manifestations of alcoholism, but the phenomena which are produced in the spinal and peripheral portions of the nervous system have been passed by with little notice. This has been due first, to the rarity of these cases, considering the large number of accidents accompanying alcoholism and, secondly and chiefly, to the fact that a distinctive diagnosis has not been made.

It is necessary that the physician should be able to recognize alcoholism, in its various manifestations, as fully and readily as the other conditions of poisoning, such as lead poisoning, etc., without being compelled to depend upon a history gained from the patient, which may prove deceptive and misleading.

It is not the object of this article to discuss the various peripheral difficulties arising from alcoholic poisoning, but only to consider that class of paralyses which arise directly from it; the symptoms by which they may be recognized and the lesions characteristic of them. These multiple peripheral nervous lesions are of interest, not only in themselves, but also in the fact that their differential diagnostic features afford a valuable contribution to the general department of general pathology. The pathology of the central nervous system has, until the present time, occupied the attention of observers, and the fact has been almost entirely overlooked that the peripheral system, more extensive perhaps than the central nervous system, is capable of occupying a most important place in general nervous pathology. Many cases of lesions of the nervous periphery are met with, which are described as of a general character, other than toxic paralyses. It is evident that these multiple nervous paralyses may be developed under the influence of various causes, and among these alcohol occupies an important place.

Some of these nerve lesions compel a grave prognosis, since they usually terminate fatally; others may be arrested in their development, become localized, and we have the chronic form of alcoholic paralysis.

In 1852 Hüss attempted to establish the existence of a chronic alcoholic paralysis, but his efforts were received with slight attention. In 1864 the conditions described by Hüss were analyzed and more exactly differentiated and classified by Lancereaux, in an article in the *Dictionnaire Encyclopædique des Sciences Médicales.* He reported a series of observations made upon two females addicted for many years to the excessive use of spirits and absinthe, who, after being attacked with pain and hyperæsthesia, particularly in the hands and feet, were attacked with feebleness and paralysis of the extremities, one developing almost complete paralysis of the lower extremeties, and the other, paralysis of the extensors of the forearm first, and later of the flexors and muscles of the leg. In the first case, recovery was the result; in the second, death; and a post mortem examination revealed an apparent sclerosis of the spinal cord and also a granular fatty degeneration of the extremities of the nerves. In 1865 he again called attention to the subject, in a case reported in the *Gazette Hebdomadaire* as occurring in connection with hepatic cirrhosis.

In 1867, Leudet, in an article upon the hyperæsthesiæ of chronic alcoholism, referred to paralytic conditions as occurring in connection with such cases.

In the following year, Reginald Thompson reported in the *Medical and Surgical Transactions*, in England, five cases of paralysis arising from chronic alcoholism; and, in 1871, Hanfield Jones reported a similar series. In 1881, Lancereaux published an article, based upon extended observations, in which he insisted that alcoholic paralysis should be classed among peripheric nervous lesions. This is the first time that this distinction has been clearly indicated; and he further maintains that certain of these cases are susceptible of cure. During the past four years several other cases have been reported by Fischer, Glynn, Dreschfield, Charcot, Broadbent and others.

In the development of this form of disease, paralysis never supervenes suddenly. It is preceded by a series of conditions which belong to chronic alcoholic intoxication. *Sleeplessness* exists for a long period; sleep is broken and accompanied by *dreams* more or less terrifying, varying in character, while complete hallucination

sometimes exists. The existence of delirium tremens is not necessarily a precursor, though this has been noted in some cases. The symptoms specially belonging to injury of the nervous centers in persons developing alcoholic paralysis are those which are included in the *sensory* and *locomotor* systems.

The paralysis is always preceded by pains in the extremities, more or less severe. In some cases these pains are of a sharp, sudden and darting character. Creeping sensations occur in the feet and calves of the legs, with burning sensations, etc. These occur chiefly at night, and frequently produce severe suffering. At this early period a slight œdema of the dorsal surface of the hands and feet may appear. This is transient, not usually remaining a long time. These conditions are succeeded by muscular feebleness and a true paresis. When paralysis has actually occurred, it appears in varying degrees of intensity, from a simple paresis to a condition of chronic paralysis, localized in the lower extremities, sometimes in the upper, or even to an almost general paralysis of rapid development.

Paresis has seemed to be a phenomenon most frequent in the victims of alcoholism, yet this has generally attracted little attention, and may easily be overlooked. It is of the nature of muscular feebleness rather than paralysis, and is most marked in the lower extremities, though the upper manifest it quite forcibly. Generally these symptoms follow a somewhat irregular course, disappearing at times to reappear with increased severity. This paretic condition is intensified by the occurrence of any febrile condition or disturbance of the gastro-enteric system. Paralysis usually occurs gradually. It may, though rarely, develop rapidly and become general. It is never complete at the outset, and requires some time to become general, and when general is not always complete; for in the extremities, though the muscles may have lost their power of responding to the faradic current, they may still be able to perform some of their functions. These paralyses affect some groups of muscles more commonly and extremely than others. In the great majority of cases, the paralysis commences in the lower extremities, in the muscles of the leg, the common extensors of the toes, and especially the extensor of the great toe.

This condition gives a characteristic appearance to the leg. The foot is extended, the movements of the foot and toes disappear, except a slight movement of flexion; the sole of the foot is turned inwards and the toes are flexed inwards upon the sole, the great toe showing this most forcibly; this is equally apparent in both legs. Lancereaux has emphasized the *symmetrical* character of the affection from its commencement in the extremities. The paralysis is not confined to the *extensors* alone, but the *peronei* and muscles of the calf are attacked and the *triceps* of the thigh. Later, as the paralysis becomes more complete, the *adductors* and *abductors* also yield. In some cases the upper extremities escape, and, in every case they are much less affected than the lower, and are only so at an advanced period of the malady. The paralysis of the superior extremities follow the same order as the lower, commencing in the forearm, being most marked in the hand, which drops upon the wrist in the same manner as in lead-poisoning. The flexors follow the extensors of the hand and fingers in the period of their invasion, and finally the *triceps* and sometimes the muscles of the shoulder share the common condition. To these positive symptoms others of considerable importance may be added. The functions of the bowels and bladder are not disturbed; neither retention of urine nor constipation appear to be present in any of the cases. The muscles of the trunk may be affected, but their condition has been less thoroughly observed.

In connection with paralytic affections, conditions of motor incoördination must be admitted. That such may exist, without paralysis, has been urged by several observers; and the cases reported by them seem to bear out this conclusion. In some cases, ability to walk is lost, and the patient is confined to the recumbent position. The characteristic condition of the legs is very apparent if the patient is made to sit upon the side of the bed or is supported by the arms by assistants. Accompanying their loss of motor power, the muscles become atropied. This is secondary and consecutive to the paralysis, and is usually proportionate to the extent and duration of the muscular paralysis. In addition to the atrophy accompanying the paralysis, very important modifications of electromotor function appear. The faradic current shows either diminu-

tion or a complete loss of electro-contractility. This is most apparent in those muscles specially manifesting paralysis, and in the order already given. This holds true with regard to the upper extremity as well as the lower.

Important as are the disturbances of the motor function, modifications of sensation, which precede them, form an almost equally striking group of symptoms. The commencement of the malady rarely comes under the observation of the physician, but one may always gather from the patient a history, which usually commences with creeping or tingling sensations, gradually increasing to a painful condition, and passing through a series of modifications involving gnawing and burning pains beneath the skin, or sharp, shooting pains in the muscles, often of the severest character as the malady progresses. These sensations are especially manifest in the lower extremities, and become generalized according to the progress of the case, and are characterized by nocturnal aggravation.

The hyperæsthesia is very marked, not only in the muscular structure, but also in the skin, and Lancereaux has called particular attention, not only to the tendency to localization in the extremities, but, also, to the fact that regions of extreme hyperæsthesia and hyperalgesia exist in the extremities. Generally, tactile sensibility remains, though sometimes it may be diminished, and, when paralysis is very marked, *anæsthesia* may appear. Occasionally, upon the extremities, regions of extreme hyperæsthesia may be found side by side with planes of anæsthesia. The sole of the foot manifests hyperæsthesia most strongly and retains it the longest. The perception of heat and cold is but slightly modified. The superficial reflexes are rarely lost and usually increased with the hyperæsthetic condition. The *tendon reflex of the knee* is lost. Lancereaux and Oettinger point to trophic and vaso-motor disturbances, which appear with the modifications of sensation and motion.

Transient *redness* of the skin, upon portions of the extremities, especially if pinched or rubbed, are met with, accompanied by sweat in patches upon the back of the hands or feet, and coldness and moistness of the extremities occur in varying severity in nearly all cases. *Oedema* of the backs of the hands and feet is characteristic and is independent of organic disease of the kidney, liver or other

viscera. *Purpura* has been very rarely noted. The skin sometimes exhibits a polished or shining appearance, but is more frequently harsh and dry and covered with branny scales. The nails are curved inward and become brittle and laminated. The skin is thickened and indurated in the later stages of the disease.

Other symptoms are also to be noted. The *emotional* condition of the patient is very noticeable and the expression of the face liable to be sad. Lancereaux points to a symptom which he considers to be quite uniformly present, early at least, and that is a relaxed and tremulous condition of the lips. Disturbances of memory and of the digestive organs are frequent.

The general history of the cases observed enables us to distinguish *three* classes of cases as regards the development of the paralysis.

The *first* comprises those cases in which a true paralysis is not apparent, but a condition of paresis occurs, preceded by the prodromata manifesting disturbed sensory and motor conditions, together with the mental symptoms already indicated. This form is chiefly limited to lower extremities, though it may be accompanied by a feebleness in the upper extremities also. It is curable, though a liability to relapse exists in subsequent indulgence to excess in the use of alcohol. It is not so frequently observed as the *second* form, which is characterized by more active prodromata. The pains are more intense, and the conditions of hyperæsthesia and anæsthesia are quite marked. The paralysis is decided, and, appearing first in the lower, manifests itself subsequently in the upper extremity, though in a much lighter degree. Hyperæsthesia is quite marked, and the *tendon reflex* is abolished. Paralysis develops slowly, and its course is chronic. Lancereaux, in describing the form of paralysis, declares it to be susceptible of cure. This statement is borne out by the experience of other observers.

The *third* form differs from the two preceding, in the *rapidity* of its development. After a considerable period, occupied by the prodromata, the paralysis appearing in the lower extremities develops rapidly in the upper also. All the symptoms mentioned previously appear in quick succession. The patient suffers from acute pains, in which condition hyperæsthesia is rapidly succeeded by anæs-

thesia. The tongue is dry, diarrhœa and vomiting are frequent and uncontrollable, bed sores occur upon the sacrum and nates, and the patient rapidly succumbs in a condition of exhaustion. The duration of this form is from six weeks to three months. The prognosis is necesfarily unfavorable.

The pathological lesions accompanying alcoholic paralysis are not yet fully recognized. Whether characteristic lesions are to be uniformally found, originating in the medullary, meningeal or peripheral portions of the spinal system has not yet been definitely settled by the observations made up to the present. General opinion seems to favor a central medullary origin of the paralysis. A medullary sclerosis, extending to the lateral fibers, and a granular fatty degeneration of the nerves of the extremities and skin have been noted. Lancereaux, in 1881, in insisting upon the existence of a specific alcoholic paralysis, at the same time pointed out as an accompaniment, an advanced condition of degeneration of the peripheral nerves, which he considers characteristic of this affection.

These lesions of the nervous structures, which are sometimes apparent to the unaided eye, consist of a loss of their pearly luster and a diminution of volume, especially in the cutaneous nerves; but microscopic examination is necessary to fully define existing lesions. By this means are seen increase in the volume of the cellular nucleus, swelling of the protoplasm, breaking of the myeline, which gathers into masses and undergoes special chemical changes. The axis cylinder is broken and ultimately disappears and, finally, the myeline is little by little absorbed until the nerve is reduced to its sheath alone, the nervous elements having disappeared. This condition is very marked in the peripheral filaments, though the trunks of the nerve show similar changes. In many of the observations by Lancereaux and others the anterior and posterior portions of the cord have been found in a perfectly healthy condition, while the peripheral nerves exhibit the changes described. It is, at present, impossible to say where the degeneration begins, whether in the sensory filaments or in the motor tracts; both of these peripheral portions are affected, and further observation is required to decide the question of precedence, if any exists.

The *therapeutics* of this disorder are simple and resources confined, in the first place, to a change in the habits of the patient, as regards the use of alcohol, and, in the second, to improving nutrition and relieving pain by a judicious use of anodyne agents; for the latter a combination of chloral and opium has been found to be the most efficient.

The treatment of the paralysis by electricity is indicated. Galvanism has been found of service.

The faradic current has been employed chiefly for the condition of muscular atrophy, and frequent repetitions are desirable.

During the past four years several contributions to the literature of this subject have been made, the latest by Oettinger; to these, and especially to personal illustrations recently extended by Prof. Lanceraux, the writer acknowledges his indebtedness.

Rome, March 15, 1886.

REPORT OF A CASE OF TUBERCULAR ULCERATION OF THE PHARYNX.

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[Read before the Medical Society, State of New York, February, 1886.]

Tubercular ulceration of the pharynx is eminently an acute affection. It runs its apparent course in a few weeks or months at farthest. Its first manifestation is usually odynphagia. This sharp, stabbing pain on swallowing, and absence of pain when the parts are quiet, are among the marked symptoms of this disease.

Its principal pathological feature is the primary or secondary infiltration of the pharynx with miliary tubercle, and the general symptoms are those of acute miliary tuberculosis—with added conditions from impaired deglutition. The ulceration begins usually on the sides of the pharynx in a number of points at about the same time. The ulcers are at first small and somewhat lenticular in form, but they rapidly coalesce by the disintegration of the intervening infiltrated tissue. The ulceration, though wide-spread, is superficial, but the sub-mucous tissues are choked with round-cell

infiltration, and fatty degeneration of the constrictors is common. The ulceration eventually extends to the upper part of the larynx, but rarely involves the vocal bands or the arytenoids. The causes of the tuberculosis are probably those which usually induce that disease, but why the tubercular manifestation should appear in the pharynx in these cases, is obscure. The subjects have not in most reported cases suffered especially from chronic disease of the throat. It is probable that in most cases the lungs, and perhaps other organs, are invaded before, or simultaneously with, the pharynx, though occasionally the primary apparent lesion is in the pharynx. In most reported cases the tubercular tendency is hereditary. The disease, like other tubercular outbreaks, is one of the first half of life and is occasionally found in very young children. The treatment up to this time is but palliative and anodyne, and there is no record of cure. Whether primary or secondary, tuberculosis of the pharynx appears equally without hope. If part of a general miliary tuberculosis, we know of no remedy. If primary, the rich vascularity of the affected part renders merely speculative the possibility of destroying or altering the degenerated foci before auto-inoculation occurs. However, it is a possibility, and perhaps the prevention of the spread of this disease may yet be the reward of early diagnosis and prompt action.

Tubercular ulceration of the pharynx until lately was confounded with syphilis of that region. Isambert, of Paris, first pointed out the tubercular nature of this affection, so late as 1875, and differentiated it from syphilis. Fraenkel, of Berlin, shortly after demonstrated conclusively its pathological and clinical characteristics. But it is still not so well recognized but that it is mistaken, and treated, for syphilis. Perhaps this accounts for its apparently very great rarity.

The frequency of syphilis in this location naturally awakens a suspicion of it in all ulceration of the oro-pharynx. However, the history of the case, symptomatic and personal, the condition of the lungs, the presence or absence of hectic, and, above all, the appearance and course of the ulceration, are usually sufficient to establish a diagnosis. It must not be forgotten, however, that the two conditions may be combined. The appearance of the tubercular

ulceration is distinctive and peculiar. Its lenticular form at first, its superficial character, with ill-defined borders and little or no areola, the "worm-eaten" appearance of its floor (like that of laryngeal phthisis), together with the general debility and hectic, furnish evidence as to the character of the disease, unmistakable to the careful observer. Certainly, the negative and even injurious effects of anti-syphilitic treatment would soon decide the question.

The case, a report of which is now offered, came under my observation on May 12, 1885. The disease was then far advanced, though of short duration. The end was speedy and fatal; the treatment neither novel nor successful. Yet, as the case not only is a typical one, but presents some interesting questions as to etiology and point of first invasion, it appears worthy of a somewhat detailed report.

F. S., male, aged 25 years, of German birth, presented, on first examination, the following symptoms and appearances: He was of cachetic palor, and much emaciated; voice was reduced to a hoarse whisper; there was frequent cough and glairy expectoration; he complained only of exquisite pain in the throat when he swallowed solids, and of night cough which disturbed his rest.

Inspection of oro-pharynx showed ulceration extending over the anterior and posterior pillars and tonsils on both sides, a short distance on to the right buccal surface, and along the free margin of the soft palate to within a short distance of the uvula. From the posterior pillars the ulceration extended backward to the lateral walls of the pharynx, and out of sight, upward behind the soft palate and downward behind the root of the tongue. The median posterior wall of the pharynx was free from ulceration. The uvula was pale, slightly swollen, and had a sub-mucous, granular appearance. The ulceration was superficial, its surface of a dirty-white color, irregularly nodular and "worm-eaten" in appearance, and covered at points with sticky, whitish secretion. It was surrounded by a faint, narrow areola, fading into a pallid mucous membrane. On the oral surface of the right anterior pillar were several small, irregular excrescences about the margin of the ulceration, which was deeper at this point than elsewhere.

Posterior rhinoscopy, with difficulty, showed the ulcer extending

along the lateral naso-pharynx and nasal surface of the soft palate. Much shining secretion covered the vault of the pharynx. The posterior nares seemed not to be invaded, though the nose was constantly filled with glairy secretion, probably from the pharynx. The laryngoscope showed the edges of the epiglottis similarly ulcerated and the ary-epiglottic folds to some extent. There was no marked swelling of the arytenoids. The interior of the larynx was congested and swollen, but not ulcerated. The ulcerated surface was not especially sensitive when touched. There was some loss of action of the soft palate.

Examination of chest showed dullness and rales over upper third of right lung. The pulse and respiration were quickened and weak, and the temperature about two degrees above normal (3 P. M.). The kidneys and bowels were reported normal in action.

Direct answer and history of case were to the effect that there was no syphilitic taint either inherited or acquired. (He said, "Every doctor has asked me that.") He had always been delicate. Had all children's diseases severely. Ten years before had "typhoid fever." Since then digestion had been rather poor. Had not been markedly liable to "colds." Had never been subject to cough. Had been married a little over one year. Had a healthy child four or five weeks old. His wife, who accompanied him, looked and reported herself in good health. About one year ago he had an attack of "throat trouble." The physician who attended and relieved him told him, he said, that "he had a little ulcer in his throat which got well."

About one month before date of examination he began to have pain in swallowing and some cough. He located the first ulceration on the right anterior pillar just in front of the tonsil, the point now most ragged and excavated, it will be remembered. He had applied to several physicians in the interval who used, judging from his description, caustics in various forms, and administered antisyphilitics. Finally he came into the hands of Dr. Burwell, who diagnosticated his condition as tubercular and sent him to me.

The family history elicited some interesting and remarkable facts, which perhaps throw some light upon the etiology of this form of tuberculosis. His parents were living and exceptionally

healthy. He had four sisters and three brothers living, all in average health. One brother died about one year before, aged 37 years, after an illness of but a few months, which from the history and description, obtained with difficulty, seems to have been also tuberculosis of the pharynx. His sickness, like my patient's, is reported as beginning with sore throat and cough, followed by rapid emaciation, exhaustion and death. His sore throat was his chief complaint. The resemblance between the symptoms and course of the two cases impressed the family and they frequently commented upon it.

About ten years before his death the deceased brother received a gun-shot wound of the thigh, requiring ultimately resection of the femur. From that time his health, before good, had been impaired, but not seriously. He and my patient worked together in the same room at their trade, the manufacture of umbrellas. This continued for some time after the brother began to be affected. It was at this time, while thus associated with his brother, that my patient had the sore-throat mentioned in his history, which he said was due to an ulcer. Unfortunately, owing to the ill-health and retirement of the attending physician, I have been unable to obtain an exact description of the character of his affection. Probably it was acute follicular pharyngitis or tonsillitis, so often spoken of by the profession as well as laymen, as "ulcerated throat."

It is fairly possible and in accord with the late theories as to the etiology of tubercle, that during this inflamed or perhaps ulcerated condition of the pharyngeal follicles and mucous membrane the tubercle bacillus may have effected lodgment therein, and after a dormant period, finding favorable environments and general conditions, may have produced the lesions described.

The theory of direct infection in some way is suggested by the occurence in so short an interval of this rare disease in two persons so intimately associated. There is no hereditary tendency to tuberculosis shown by the family history. That two members of so large a family should die of consumption is neither remarkable nor proof of taint. But the selection by the disease, in both cases, of the same unusual site, and its occurrence in the second case in so short a time, without any special weakness of the throat, except at the time

when exposed to possible infection, certainly give tenable ground for the belief that the localization of the tubercular deposit, if not its entire causation, was due to infection.

The progress of my case was steady and rapid to a fatal end. Diarrhœa set in about June 1st. The ulceration spread until all the parts back of the anterior pillars were one huge ulcer. The patient died from exhaustion June 9. No post mortem was allowed.

Of the treatment little need be said. Iodoform and morphia were freely used as topical applications. Cocaine as spray, powder or lozenge, was not found so useful as in some cases of laryngeal phthisis. Dietetic and other measures were used to promote and conserve strength. In a beginning case, I would enforce absolute quiet of the parts so far as possible, feeding through a tube, or per rectum, as recommended by Delavan, Robinson and others.

An interesting question as to whether the tuberculosis of the pharynx was primary or consequent to its outbreak in some other organ, has already been touched upon in discussing the possible causation of this case. It is further suggested by the following facts, brought to notice after the death of the patient: In the preceding February, about six weeks or two months before the beginning of last illness, he was examined for insurance by Dr. Folwell, of Buffalo, and passed as a fair risk. Dr. Folwell told me since that at that time the appearance and condition of the man were indicative of fair health. I have seen the application for insurance and the physician's certificate, and the general health, pulse, respiration, weight and condition of lungs and kidneys, were reported normal. Now, was there anything in the history to awaken special apprehension? When I first examined the case in May, the evident chest lesions were confined to one lung and were neither extensive nor immediately threatening. The kidneys and bowels were reported normal in action. The man was still attending to his business.

When we consider that a few weeks previously the lungs presented no evidence of disease; that now no other organs appeared diseased except the lungs, and they were not extensively involved, while the throat lesion was far advanced; and when we consider, in connection with this, the apparent remarkable association with the case of the dead brother, and the absence of evidence of constitutional tendency to tuberculosis, it appears as though we might rightly designate the pharynx as the original seat of tubercle, in this case.

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S. Cecil Stanton, LONDON AGENT, 17 Southampton Row, London, W. C.

BUFFALO, N. Y., MAY, 1886.

REINFUSION OF BLOOD DURING MAJOR OPERATIONS.

In the *British Medical Journal* of Jan. 30, Dr. John Duncan has suggested an expedient which may tend to avert fatal shock in certain cases where we most dread it; an expedient so simple that each will wonder, on reading it, that he himself had not thought of it before. Every one meets with cases, now and then, where a given operation ought to be done as the only possible hope, yet is not made simply because of a fear that the patient could not bear the inevitable loss of blood. In such cases Dr. Duncan's suggestion is to catch the blood, as it flows, in a dish containing a solution of sodium phosphate; this mixture is then, by means of a syringe, reinjected into the patient's veins.

Cases which will most often call for this treatment are those in which a high amputation is required. The dominant idea is to utilize the blood flowing from the amputated limb. It is difficult to thoroughly empty a shattered limb of its contained blood before amputating; but at the moment of making the incision as well as while tying the vessels, and testing to see that all are secured, a certain quantity of blood may always be procured. That which may easily drain out of the amputated limb within the first minute or two should also be obtained. The importance of even a few ounces of blood in certain cases of shock is well nigh inestimable. A simple

saline solution may for a time supply to a feeble heart the means of working, but to the virtues of such a solution may thus be easily added those of a genuinely nutritive substance of vital properties.

Dr. Duncan recommends a short glass tube, the size of a No. 6 catheter, one end drawn out to a small point, the end slipped inside a two-inch piece of rubber tubing. An ordinary glass syringe of four-ounce capacity is all that is needed. These are thoroughly cleansed and antisepticized. A glass vessel kept afloat in a basin of hot water is made ready to receive the blood. In amputations the most convenient vein is selected on the face of the stump, the glass point inserted and a cat-gut ligature put around it. While the process of securely closing all other vessels is going on the blood is caught, by an assistant, in the soda solution, and is slowly injected by another.

The alkaline solution is of a strength of 5 per cent. sodium phosphate, and one part of this is used to three parts of blood. Even a larger proportion of solution may be used to advantage. In none of Duncan's cases had his patients the slightest disturbance during or after the infusion.

The process of re-infusion is incompatible with the use of the spray or with irrigation during the operation; but in most cases the latter may be postponed till the close of the operation without detriment. The procedure certainly commends itself very highly *a priori*, and the reported results appear to fully justify it.

PROPOSED SANITARY LEGISLATION.

We would call attention to the action of the Medical Society of the County of Erie at a special meeting held on the 3rd of April. The society then gave its hearty support to a measure which, in the minds of all thinking physicians, must be of the utmost importance. The manner in which orphan asylums and residential schools have, in general, been conducted, has been such as to lull the public into a sense of security that the hygienic surroundings of the children were all that could be desired. Accordingly, when a question was raised in the Academy of Medicine, of New York City, some time ago, as to whether or not these institutions were fostering disease, it

was not strange that a strong committee should have been appointed to investigate so important a subject. Moreover, that committee associated with itself some of the leading philanthropists in the State, and the results of their investigations are such as to surprise nearly everyone. It appears from their report that many of these institutions were in a wofully unhealthy condition, and specially was this the case as far as the eyes of the children were concerned. We need cite only a single instance out of very many that were given. For example, in the St. Patrick's Orphan Asylum, female branch, Dr. Agnew found 303 cases of communicable eye diseases among 409 children examined. In the male branch of the same institution Dr. Noyes reported that only 105 out of 357 inmates had healthy eyes. Up to February 2, the committee had investigated thirty-two asylums and residential schools, having a total of 10,294 inmates, and of these 3,332 had contagious ophthalmia. Moreover, the condition of the children otherwise was far from satisfactory, many of them suffering from skin diseases and other communicable troubles. It is no wonder, therefore, that a bill which sought to regulate these sanitary imperfections should have been introduced into the legislature, and hearty endorsement given it by the New York State Medical Society and also by the Erie County Medical Society.

In the uncertainties of legislation it may not become a law this year; but even if it be now defeated by those jealous of the least interference with unlimited power, it is certain that as soon as the public is fairly awakened to the truth of the matter, the much-needed reform will be brought about.

DEATH'S DOINGS.

Since our last number went to press three prominent physicians have passed from our midst and many mourn their loss.

Dr. C. C. F. Gay had attained a ripe age and wore his gray hairs with a graceful dignity that few attain. His life work was familiar to most of our readers, because he had for years been prominent among the workers of the Buffalo profession. His clinical opportunities had been large and his experience valuable. While never giving up general practice he yet had an unmistakable fondness for surgery and practiced largely in this field. His kindly, genial nature will

cause him to be deeply missed not only by his former patients but by his young professional brethren for whom he always had a kind word and a helping hand.

* * *

Dr. Donald Fraser Macpherson had been a resident of Buffalo but three years, yet in this time he had endeared himself to all, in and out of the profession, by many sterling qualities. Although scarcely yet attained to the so-called middle years of life he was a man of profound scientific and medical attainment, having enjoyed the best educational advantages abroad as well as at home; while as a practitioner he was not only peculiarly keen in diagnosis but unceasingly watchful and alert in the conduct of a case. His judgment was as accurate and reliable as were his systematic habits of thought and study. As a teacher he was peculiarly happy in his ways, and it was evident that he possessed the true didactic habit in large degree.

His loss will be keenly felt by a large circle of professional friends and acquaintances. In his case death was a relief from a peculiarly distressing, lingering malady which had prostrated him for many months.

* * *

Dr. J. S. Trowbridge had spent all of his seventy ripe years in Buffalo, where he was born, and was consequently universally known here. During 1849, when the city was devastated by the Asiatic cholera, he was the City Health Physician, and in that capacity devoted himself unsparingly and heroically to the responsible and ponderous tasks connected with the office. In this capacity he so acquitted himself as to call out, even at the present day, glowing encomiums from colleagues who were then associated with him. He not only served his city in positions of fiduciary responsibility, but his general government, during the war, in a professional way. Everywhere he made warm friends and won the respect of those whom he served or who served him. Of late years he had dropped out of active practice, and his face was consequently less familiar to the younger members of the profession than to the older ones with whom he had toiled so many years. He had known well every prominent physician that ever practiced in Buffalo, and his reminiscences of some of them were most entertaining.

Correspondence.

PHARMAKOLOGISCHES INSTITUT
DER UNIVERSITÄT BERLIN,
April 10, 1886.

TO THE EDITOR, MEDICAL PRESS OF WESTERN NEW YORK:

Dear Sir: I have been informed that Theodore Metcalfe & Co., of Boston, Mass., in an unprecedented manner, without my permission, have copied my article on "Lanolin," which was translated from the German especially for the MEDICAL PRESS OF WESTERN NEW YORK and the *British Medical Journal.* In so doing, they omitted the names of the manufacturers of lanolin, Drs. Jaffé and Darmstädter, to whom I am indebted for the genuine material employed in my investigations. Again, without my authority or sanction, this Boston firm is now distributing a printed pamphlet of my lecture broadcast in connection with a product of their own, which does not merit the term "lanolin" on account of the impurities which it contains. The dealing out of such foul stuff may interfere with the introduction of a useful drug. Therefore, in the interests of science, which may bring her observations in conformity with my research, I hereby publish this disgraceful act on the part of the above-mentioned firm. Yours most respectfully,

DR. OSCAR LIEBREICH,
Professor of Materia Medica, University of Berlin.

BUFFALO, N. Y., April 9, 1886.

EDITOR MEDICAL PRESS:

Recently, in twelve cases of labor attended by me in one month, knotted cords were present in three. This seems to me an unusual occurrence; if you think it worth while you may note it in your valuable journal.

Sincerely yours,
B. G. LONG.

1430 Main street.

THE EXCRETION OF URINE IN ITS RELATION TO ABDOMINAL SURGERY.

In the *Annales des Mal. des Org. Génito-urinaires*, May, 1885, Thiriar says that if the chlorides in the urine after laparotomy sink below one grm. in twenty-four hours (twelve grms. being the normal amount), that we must look out for septic peritonitis. As long as a

higher excretion than one grm. is maintained no serious apprehensions need be entertained, even should the patient have fever, emesis, etc.

We are inclined to doubt the exactness of this statement, and think it will be more correct to become apprehensive when symptoms of peritonitis develop, even should the lowest figure of chlorides-elimination not obtain.

In the establishment of the diagnosis of doubtful abdominal tumors Thiriar lays great stress on the excretion of urea. He says that in cases of malignant tumor the amount of urea per diem sinks below twelve grms. The normal amount is thirty-two grms. Thiriar considers this test so reliable that he trusts to it even in the determination of malignant or benign stricture of the pylorus.

Society Proceedings.

ERIE COUNTY MEDICAL SOCIETY.

Special Meeting, April 3, 1886.

Dr. E. T. Dorland in the chair.

Dr. H. R. Hopkins stated that the object of the meeting was to ask the endorsement of the society of a bill now pending in the Legislature. The text of this was as follows:

AN ACT FOR THE BETTER PRESERVATION OF THE HEALTH OF CHILDREN IN INSTITUTIONS.

SECTION 1. Every incorporated institution in this State receiving or caring for children, excepting hospitals, shall have attached thereto a regular physician, duly licensed to practice under the laws of the State and in good professional standing.

§ 2. The name of such physician and his address shall be posted and be kept posted conspicuously within such institution, near its main entrance.

§ 3. It shall be the duty of the officers of such institution, before receiving any child therein, either upon commitment or otherwise, to cause such child to be examined by said physician and a certificate in writing to be given by him that such child is apparently a safe and proper subject for the care of such institution, and is apparently not suffering with any contagious or infectious disease, especially of the eyes or skin, which might be communicated to the other inmates thereof. Such physician shall specify in such certificate the physical and mental condition of the child, the presence of hereditary or other constitutional indication of disease, and also any deformity or abnormal condition which he may find upon examination to exist. Such certificate shall be kept by the officers of the institution filed with the commitment or other papers on record in the case, and no child shall be so admitted until after such certificate shall have been furnished, as above provided.

§ 4. On receipt of such certificate the officers of such institution shall, on receiving such child, place it in strict quarantine for ten days thereafter in a building or apartment separate from the other inmates of the institution; and at the expiration of said ten days the child shall be again examined by such physician and an endorsement then made by him on such certificate of any change since the

previous examination, and the officers of the institution shall thereupon, in pursuance thereof, receive or reject said child, as by such physician advised.

§ 5. It shall be the duty of such physician at least once a month to thoroughly examine and inspect the entire institution and to report in writing, in such form as shall be approved by the State Board of Health, to the Board of Health within the district or place where the institution is situated, its condition especially as to the plumbings, sinks, water-closets, urinals, privies and dormitories, and also as to the physical condition of the children, and the existence of any contagious or infectious diseases, especially of the eyes or skin, and as to their food, clothing and cleanliness, and also whether the officers of such institution have provided proper and sufficient nurses, orderlies and other attendants of proper capacity to attend to said children, to secure them due and proper care and attention as to their personal cleanliness and health, together with such recommendations for the improvement thereof as he may deem proper. And it shall be the duty of such board to immediately investigate any complaint, and if the same shall prove to be well founded, to remedy the evil without delay.

§ 6. No child suffering from any contagious or infectious disease, especially of the eyes or skin, shall be allowed to enter or remain in any such institution in contact with any children not so affected, but shall immediately be isolated or placed in a proper room or infirmary which shall be provided for that purpose by the officers of the institution under the direction of said physician.

§ 7. The beds in every dormitory in such institution shall be separated by a passage-way of not less than two feet horizontally, and all the beds shall be so arranged that under each of them the air shall freely circulate, and there be adequate ventilation. Every dormitory, if it does not communicate directly with the external air and is without an open fire-place, shall be provided with special means of ventilation by a separate air-shaft extending to the roof, or otherwise, as the Board of Health within the locality may prescribe.

§ 8. It shall be the duty of such physician to notify in writing the officers of such institution whenever any dormitory therein is so overcrowded that there shall be afforded less than six hundred cubic feet of air to each occupant thereof, and the said officers shall thereupon immediately reduce the number of occupants of such dormitory, so that the inmates thereof shall not exceed one person to each six hundred cubic feet of air-space in such dormitory.

§ 9. Any person who shall omit, neglect or refuse to comply with or to discharge any duty imposed by this act, or who shall violate any provision thereof, shall be guilty of a misdemeanor.

§ 10. This act shall take effect on the first day of July, eighteen hundred and eighty-six.

He then moved the adoption of a resolution approving the enactment of the proposed law and asking our representatives to give the matter their favorable consideration and personal attention.

When the motion had been seconded,

Dr. Howe said, at a meeting of the Academy of Medicine of New York city, some months ago, the importance of contagious diseases in asylums was brought up for discussion, and at that time a committee was appointed to investigate the subject. This committee was composed of Drs. Agnew, Bull, Webster, Smith, Derby and Jacobi, and as its associate members, Dr. John J. Milshaw, Representative of State Board of Charities, Arthur G. Sedwick, Representative of the State Charities Aid Association, Elbridge T. Gerry, Presi-

dent of the Society for the Prevention of Cruelty to Children, James Gallatin, President of the New York Association for Improving the Condition of the Poor. These gentlemen associated with themselves nearly all the leading surgeons in the entire city who were in any way prominent as oculists, together with some others who were experts in judging as to the health and surroundings of children. Many facts of the utmost importance, relating to the condition of children, were furnished by the investigations made by its associate members. At present, however, I have only time to ask your attention to one phase of the subject, *i. e.*, the influence of asylum life upon the eyes of children, inasmuch as this was one of the most important questions arising and the one alone with which I have to do. The main question which arose was in regard to a form of communicable disease of the eye, namely conjunctivitis. The committee called attention in italics to the well-known fact that the disease may exist for months, and even years, in eyes which to the lay attendant, and even to the patient afflicted with it, have seemed to be perfectly healthy. It follows, therefore, that the greatest care should be exercised in preventing the admission to any such asylum or school of any children whose eyes are not in a healthy condition, but if by chance such a condition does develop, to have the individual properly quarantined, and above all things, to make the opportunities for carrying disease from one to another by means of towels, sponges, wash-bowls, or by overcrowding, or in any other manner, as slight as possible. In view of these facts we may be somewhat astonished to find that in a city like New York so great inattention is given to subjects which would seem to be of so much importance. The committee cites many examples of which it is necessary to select only a few to show the gravity of the subject which engaged their attention. For example, in the Ladies' Deborah Nursery and Child's Protectory, Health Inspector Stillwell says that the plumbing and lavatory are of the poorest kind, and the school sinks in the yard are dirty and offensive; in the cellar were abundance of rubbish, a dead cat, and a leaking Croton water-pipe saturating the earth's surface with moisture. The screw-cap of a sewer in the cellar was off and gases freely escaping, a drilling-hole in the iron pipe allowing also escape of gases. At St. Joseph's Asylum Health

Inspector Ewing reports the lavatories very defective, including the trough and spigot plan, with a separate towel for each child, but the towels are hung in a row with only four inches space between the towel-hooks, so that the towels themselves lie in contact. In St. Joseph's Industrial Home Dr. Stillwell reports: Each child is given a towel daily, which, after use, is collected and dried without being washed, and oftentimes the same day is distributed to others. In the New York Juvenile Asylum Dr. Stillwell says: The boys' lavatory is supplied with running water and thirty-five roller-towels are allowed daily for six hundred and fifty boys. Dr. Andrews says of the Hebrew Sheltering Guardian Society: The eyes of children are not examined before admission. Children with diseased eyes are not quarantined. In one house there are seventy-six children, seventeen of whom have contagious eye disease; but there are in reality only thirty-five healthy eyes in the house. Up to February, two returns had been received by the Committee of Investigation from thirty-two asylums containing 10,264. Of these 3,322 had contagious ophthalmia, the percentage being over thirty-two. As a result of the report, and of the facts which were brought to light by that committee, this bill was drafted. At the last meeting of the New York State Medical Society the proposed act received an unanimous endorsement. Desiring to enlarge its sphere of investigation the chairman of this committee of the Academy of Medicine addressed a letter to me requesting coöperation from this section of the State; it was accompanied by the proper forms to be filled out, and also blank letters to others whom it might be desirable for me to invite to join in the investigation. Accordingly I have asked coöperation of Drs. Abbott, Grove, Hubbell and Starr, and together we have followed the same line of investigation which has been pursued by similar workers in the city of New York. Not only were the eyes examined but an investigation was also made as to whether children with diseased eyes were admitted, or, after they were admitted, as to whether they were quarantined. Moreover, the reports thus far completed contain the number of the children with both eyes injured, under whose care and treatment they were in or outside of the institution, a general description of the buildings and their surroundings, of the drainage and plumbing, the ventilation

and warming, as to the average census reported to authorities, and as to the census when visited; as to the *per capita* space for sleeping, eating, studying, working and playing, and special attention given to the lavatories, their construction and management. It would be premature to report at present upon these institutions separately. The facts were collected at the invitation of this committee and properly belong first to them. For the present purpose, however, it will not be out of place to make some statement concerning the children as a whole. Dr. Richard H. Derby, chairman of that committee, reported in the *Medical Record* of June 13, 1885, concerning the inmates of various asylums of which he knew. In thus acting as an individual he was careful not to mention any institution by name, and only stated the general facts in order that some conclusion might be drawn for immediate use. In a similar manner I am not warranted in giving facts at present concerning the individual institutions, but for our present purpose it will be sufficient to state that while the management of the orphan asylums of Buffalo appears to compare admirably with that of similar institutions of New York, still much would be accomplished in Buffalo also by the passage of a bill like the one proposed.

As evidence in support of this statement it is proper to say at present, therefore, that in co-operation with the gentlemen whom I have mentioned, an examination has now been made of the children's eyes in four of the largest asylums in Buffalo, and it was found, out of a total of 340 children there were 116 who suffered from some form of the inflammation of the lids already referred to. The causes of this large proportion are unfortunately too evident.

At three of the institutions the number of wash-bowls is not sufficient, and, in spite of rules to the contrary, inoculation will occur by the bowl not being properly cleansed by one, before being used by another. Moreover, although there is oftentimes a separate towel for each child, yet these are hung only within a few inches of eace other, so that they overlap, and being in constant contact are like one and the same. Worst of all, in one case there were two roller towels in one wash room, and two sinks; and here, I was told, nearly thirty boys daily washed. In the same institution, there were, and have been, numerous cases of scalp disease, and one

brush and comb had been used for a large number of the children before the attendant physician had his attention called to the practice, and, of course, promptly put a stop to it.

As for the sleeping apartments, too, many improvements could be made. Instead of 600 cubic feet of air, which each child should have, it is, in several instances, notably less; and the proximity of the little beds shows a tendency to overcrowding. The methods for ventilation could also be improved, and plumbing, in one instance, at least, is by no means of the most recent or safest pattern. These facts are to be presented by us in detail to the committee.

To attempt to individualize the institutions or go into detail now would only call forth unfavorable criticisms. Far be it from me also to censure the earnest women who, in many cases, give their entire life to the care of children. It is rather to be regretted that their attention has not sooner been called by medical men to the improvements which might have been made in the condition of the institutions; for while thus fully appreciating their faithful endeavor, one can but regret the slight attention paid to the most elementary facts of sanitary science.

Other considerations regarding the general health of the little ones I must of necessity leave to those who are better able to discuss them. But if no other facts but these were elicited, and no comments were made upon the few statistics given, they would form of themselves an eloquent plea in behalf of children's eyes.

Dr. Abbott said the importance of the subject did not at first seem very great to him. If he had been asked how many cases of eye diseases there were at an institution which he attended he would have indignantly denied its presence at all, and yet a careful examination showed a very considerable percentage.

Dr. Greene thought it might be well if the public schools were examined in the same manner to advantage.

Dr. Folwell also considered the proposed law a wise one and was strongly in favor of the society giving it all possible endorsement.

After some other discussion the resolution was adopted unanimously.

Book Reviews.

BRAIN REST; THE CURATIVE PROPERTIES OF PROLONGED SLEEP. By J. Leonard Corning, M. D. Pp. 135. New York: G. P. Putnam's Sons. 1885.

This is a *brochure* on the advantages of prolonged sleep in cases of nervous exhaustion. Its author is now most favorably known as the inventor of a method for prolonging local cocaine anæsthesia. The chief features of the system are beside prolonged sleep, increased general and cerebral nutrition, and elimination of psychical irritation and sensory illusions, particularly as conveyed through the eye and ear; in other words, brain rest.

The writer is known as having, independently of Fleming, carried on experiments with reference to causing sleep by compression of the carotids. This, of course, implies that sleep is at least coincident with cerebral anæmia within certain bounds. That for brain exhaustion brain rest is necessary; that brain rest is best achieved during sleep, *i. e.*, physiological anæmia, and that this latter is obtainable by mechanical as well as medicinal means, is the chain of reasoning followed out with persistence and logical sequence. The eighth chapter is devoted to the mechanical and electrical means of the author's device for so far controling the cerebral circulation as may seem desirable. Whether these shall prove as serviceable as his experiments in anæsthesia time only may determine. The book is, however, entertaining and suggestive and will well repay perusal.

WÖRTERBUCH DER BACTERIENKUNDE. Bearbeitet von Prof. Dr. W. D. Miller. Pp. 43. Stuttgart: Ferd. Enke. 1886.

Dr. Miller has conferred a very great favor on students of bacteriology by publishing a glossary of the terms peculiar to its technology. It is in fact a brief special dictionary of words pertaining to a special subject. Under its proper heading each bacterium receives a very brief description, while its peculiar properties, pathogenic action, average size, classification, habitat, etc., are not forgotten. Technological and morphological terms are also inserted.

We are pleased to learn that this is but the introduction to a much larger work, of a similar but enlarged scope, now in preparation by its exceedingly industrious author, whose appearance we shall hail with great eagerness.

ERYTHROXYLON COCA. Presented with the compliments of Parke, Davis & Co., Detroit. Pp. 103. 1886.

This enterprising firm have prepared a very handsome narrative of facts concerning Coca, its botany, its derivatives and their physiological action, and the wonderful rôle its derivatives now play in actual practice. The account given of its history is very entertaining and well worth perusal. The volume contains a great deal of valuable information, and is very handsomely published, and as it may be had of the publishers for the asking, there is no reason why any should remain ignorant concerning the virtues of this remarkable drug.

HOW WE TREAT WOUNDS TO-DAY. By Robt. T. Morris, M. D. Pp. 162. New York: G. P. Putnam's Sons. 1886.

Dr. Morris, though yet a very young man in the profession, has succeeded in writing an admirable little book on the details of Antiseptic Surgery in the true sense of the term. Every statement he makes bears the stamp of veracity and of earnest conviction. He has chosen a pithy, sententious, epigrammatic style which might strike some as puerile, yet his short sentences are incisive and compel respect. We have only space to quote a few of them which must serve as samples.

"A mild statement is made when we say that more misery can be avoided by actual scientific antiseptic surgery than by anæsthesia." "Many shadows are thrown on actual scientific antisepsis by men who suppose that they are doing orthodox work when they are really doing nothing of the sort. These operators hurt the reputation of the cause."

"The time has come when it is best for the general practitioner to have as little as possible to do with surgery."

"I know a prosperous merchant who hangs his barometer out of the window so that pressure variations can have easy access to it; but this does not reflect upon his ability to lead a bull movement in the corn market. I am acquainted with surgeons who treat amputation wounds by the open method, and who would generally have to amputate in a gun-shot wound of the elbow joint in order to get a good open wound; but this does not reflect upon their ability to treat typhoid fever well."

The book should be in the hands of every practitioner, that those who do much surgery may learn how to do it well, and that those who do little may be more favorably impressed with the lesson that they had better do none.

A Reference Handbook of the Medical Sciences. By various writers; illustrated by chromo-lithographs and wood engravings; edited by Albert H. Buck, M. D. Vol. II. New York: William Wood & Company.

Subscribers and readers will hail with delight the appearance of Volume II. of the Handbook, a delight not shared in by the critic, who will find but little upon which to vent his spleen. Indeed the variety and excellence of the subject-matter will severely task the faultfinding powers of the most veteran reviewer.

The race for the supremacy in their respective departments between Messrs. Wood and Dr. Buck still continues so close that only the most experienced in matters pertaining to the literary work would dare hazard an opinion as to the outcome.

The six chromo-lithographs and the many wood-cuts are truly excellent and enhance the value of the volume, not only from an artistic point of view, but also by greatly elucidating the text.

For the anatomist and physiologist there is much that is instructive in the ably-written and well-illustrated articles upon the cranial nerves, elbow-joint, functions of the cerebral cortex, digestion and other subjects.

The student of histology has been well remembered with both text and wood-cuts. These latter are admirable and will stand favorable comparison with those in any histological treatise we have seen.

In materia medica such important medicinal agents as chloral, chloroform, cinchona, copper, ergot, ether and many others have been thoroughly discussed by well-known observers. Much valuable, though condensed, information will be found under the headings, Diaphoretics, Diuretics, Emetics and Expectorants, where the principal members of each class are mentioned and their therapeutic application clearly pointed out.

The articles upon chancre, club-foot, cholecystotomy, duodenocholecystotomy and others will prove useful to the surgeon. Dislocations, from the pen of Prof. Moore, formerly of the University of

Buffalo, will be read with much interest by his old pupils, so many of whom are readers of THE MEDICAL PRESS.

The application of electricity in the diagnosis and treatment of medical and surgical diseases is ably and fully given, the latter division being profusely illustrated.

Such diseases as cerebro-spinal meningitis, cholera, diabetes, diphtheria and dysentery have received liberal space and thorough treatment by well-known writers. We note with much pleasure the space devoted to the consideration of such so-called slight ailments as catarrh, colic, cramps, constipation, cough, diarrhœa and dentition. The young practitioner can not fail to appreciate the, to him, especially useful information here given.

The ear and the eye have been so thoroughly and ably considered that it would require a separate review to do them any manner of justice. We thoroughly commend them to the earnest study of every reader of this volume, believing that they will be better aurists and oculists for having read them.

The utility of this book belongs not only to the physician and surgeon but the students of biology, climatology, medical jurisprudence and the other sciences allied to medicine, who can glean much valuable knowledge from its pages. We await with no little impatience the advent of Vol. III.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

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For Sale.—The Medical Library of the late Dr. Macpherson. It contains many valuable English, American and German works. Can be seen at the Medical College Library.

BOSTON MED.
JUL 31 1886
LIBRARY ASS'N

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THE EARLY MANAGEMENT OF CASES OF MENTAL DEPRESSION.

By Willis E. Ford, A. M., M. D.
Utica, N. Y.

[Read before the Medical Society of the State of New York, Feb. 2, 1886.]

It is not my intention to go into the literature of the subject of mental depression, but to call attention to certain facts in which the general practitioner will be interested, and to certain conclusions reached, as a result mainly, of my own observation. From three points of view, the subject is seen to be important. First, from statistics we learn that one person in five hundred becomes insane, while a much larger ratio of mentally maimed and temporarily disabled strew the highway of civilized life. Secondly, nearly all, if not quite all cases of actual mental disturbance begin with a period of mental depression. Thirdly, conditions of mental depression are amenable to such early management as to save many from actual insanity, while in others it may shorten the attack, and withal will lessen the chances of accidental death or violence. Just what proportion of any given community falls from the ranks, insane can never be definitely known. It is obvious that hospital and asylum reports do not give the full number and perhaps do not more nearly approach the actual number than in former years. While it is true that the prejudice against asylums does not cause the hiding away and concealment of the markedly and dangerously insane, as in former years, it is also true that a larger number of milder types of mental derangement are treated at home.

The cases of insanity occurring in civilized communities are probably in the proportion of one, to three hundred or three hundred and fifty of the population. Insanity causes greater hardship to the friends of the patient than other illnesses; its progress is slower, it is more distressing to witness, the probable chance of recovery is only about thirty-five per cent. of all cases, and mental alienation brings about many complications as regards property.

It is hard to admit, but it seems to me statistics indicate, though they rarely prove anything in these matters, that with increased knowledge of the disease in every aspect, the proportion of cures of advanced cases of insanity is not materially altered. That the earliest symptoms of the disease are amenable to treatment, and that structural changes which cause grave disorders may sometimes be averted is readily admitted. These early manifestations are rarely brought to the attention of asylum physicians. Thus there is urgent necessity for the general practitioner to appreciate the insidious incipiency of the disease, else an opportunity of the utmost importance to the patient is lost, and the seal of hopeless insanity affixed, it may be, to an otherwise curable illness. Aside from general paresis, the manias with epilepsy and the disorders resulting from traumatism, in the vast majority of cases, a period of mental depression, more or less marked, is the forerunner of insanity. My attention was called to this fact when I was an assistant in the Utica asylum, where it was my duty to write the histories of the patients as they came in. Experience showed that whenever a reliable history could be obtained, it was a rare thing, even in manias of various kinds, not to find that there had been an antecedent period of depression. In private practice I have been still more impressed with this fact. I think it can not be succesfully maintained that all insanities are essentially chronic from the beginning, as has so often been asserted, and as is still maintained by many alienists. It is not fair to say that every state of depression, whether emotional or intellectual, which by early and judicious management ends in recovery in a few weeks, is therefore a transitory affection and would never have eventuated in a permanent mental alienation.

On the other hand, the inference seems to me just, that many cases that do end in grave insanity might have been stayed, if an

early diagnosis had been made and appropriate treatment forthwith instituted. In no other field do preventive measures promise more. It is perhaps sufficient for our purposes to make two general classes of cases of mental depression—one, to embrace those in whom there is intellectual perversion, and the other, those in whom the emotions alone are disturbed and there is no fixed delusion. Mere depression of spirits from temporary ill-health, and the sad and depressing views of life, forced upon us by adverse circumstances, or that depression due to remorse and shame following alcoholic excesses, do not properly come within the scope of our present inquiry. It may be proper to say, however, that anxiety, care, responsibility and grief do not usually produce morbid mental depression so long as the physical health remains good. Even prolonged mental strain is not much more likely to produce, in the average man, a morbid mental state than it is to cause disease of the lungs, kidneys or digestive organs. It is only when these moral causes are accompanied by physical disease, or when they are sufficiently prolonged to cause changes in nutritive functions of the debilitated subject that the brain suffers to the extent of producing a condition of such mental depression as to call for medical interference.

On the other hand, many of the cases of so-called neurasthenia or nervous depression that have been cited by writers in this rather new and therefore perhaps ill-defined field, were undoubted cases of melancholia, and the importance placed upon single symptoms or sets of sensations, in the attempt to minutely classify and describe them, must have done the patient much harm and the doctor no good. As to the morbid anatomy of these conditions, little, perhaps, is definitely known, though enough, I think, to warrant the assumption that the trouble begins either because the constituent elements of the blood are such as to furnish insufficient nutrition to the brain, or that the arterial tension is in some way interfered with. While great losses of blood rarely leave permanent effects upon the mental stability of the individual, I have seen so many cases of enlarged liver (associated with apparent changes in the quality of the blood from errors of diet, mode of life, or chronic malarial poisoning), productive of mental depression of the gravest

sort, that I cannot help thinking the proper function of this organ a necessity to safety; and this not so much from the danger of retained morbid products, as from an interference with the assimilative functions. The structural changes arise from loss of vaso-motor control, relaxation of the venous and capillary system, and the lymph exudations which occur along the lines of the vessels. If this exudative material becomes organized, it follows the laws which govern exuded lymph elsewhere and interferes with the nutrition of the tissues involved. These structural changes, which produce fixed intellectual disturbances, occur more frequently in physically debilitated and over-worked and under-fed persons. Hence, the reason that mental depression, with intellectual perversion and frequent suicides, is found oftener in the working classes, while that depression which is characterized by emotional disturbance only, is found more frequently among the educated and better fed.

In 1884 I saw 77 cases of mental disturbance in private practice, of which number 32 had melancholia with intellectual perversion, 23 with emotional disturbance only, 20 had mania in its various forms, and two had terminal dementia. Of the whole number, 11 were seen for the sole purpose of commitment to asylums. My notes of cases kept for over a period of seven years show about the same proportion of cases of mental depression, though some years the whole number has been larger and some years smaller. I do not take these figures to indicate, with anything like exactness, the proportion of cases of continued depression to all other forms of mental disturbance, but, rather, to intimate the kind of cases seen by me; and no attempt will be made here either to give a critical analysis of them, or a comparative estimate of the mode of treatment adopted.

Of the first class, true melancholia with intellectual perversion, a few cases develop suddenly from severe mental strain with a debilitated physical condition, and are characterized by vague apprehensions, depression of spirits, sleeplessness, inability to take food, a generally disturbed condition of the secretions, great mental activity which gradually becomes perverted, and the assumption of false premises; then some trifling circumstance gives color to delusion, and reasoning from false premises begins. Delusions of this sort, arising within the individual and apart from outside influ-

ences, differ herein from sane delusions the result of communicated information. Little or no good comes from an attempt to argue the individual out of such delusions, and it is only by decided measures that the attack can be prevented from becoming fixed insanity. After a week or ten days the self-control may be so far lost as to cause violence, or the patient may become more confused mentally and the depression pass suddenly into furious maniacal excitement. A case of this kind recently began by refusal of food, sleeplessness, and depression of mind, and in a few days the delusion possessed the man that he could not swallow. His statement was accepted by the physician, who summoned me in consultation to see a case of hydrophobia. I advised his immediate removal to an asylum, but before the family could be brought to consent, he broke out into the most furious mania and required restraint to enable them to get him to the asylum. He recovered in about fifteen months.

Many cases can be aborted, however. A striking example of this latter fact was seen recently in a young farmer who was drawn on a jury in a murder trial. He had rarely been away from home, and, though possessed of fair natural abilities, could neither read nor write. During the week he sat on this jury he was in constant fear lest his associates should discover his illiteracy and this would prevent his giving an honest opinion in the end. He ate but little and slept not at all, and his bowels were not relieved during the entire time. He had never been in court and was much confused and alarmed by the statements of counsel and witnesses. Nothing unusual was observed in his conduct during the trial. When the jury was discharged he fled precipitately from the court-house, and, without waiting for street cars or railway trains, made his way on foot some eight miles through deep snow to his home. On his arrival there he was in a state of apprehension; said he had done a great wrong, though he could not tell what; that the sheriff was after him; that every sleigh that came up the road carried a sheriff; that his neighbors would arm themselves and hunt him down, etc. He tried to conceal himself under the bed, refused food, and in this state of great fear passed the night and the next day. After two days I saw him. His physician said he was unable to get

any effect from bromides or morphia, that he had not changed materially since he came home. He had no rise of temperature, his pulse was about eighty, and his pupils were slightly dilated. He said he had not slept in a week; that he had done wrong in sitting on a jury when he could not understand the case, and reiterated his delusions. He was alert, restless, constantly peered out of the windows, and was suspicious of every move made by the family. A cathartic was ordered, liberal doses of milk punch given, and at night, half a grain of bromide of morphia with fifteen grains of chloral. He was given a hot spinal bath before retiring, and slept eight hours at first, then was given more food, and again slept. Ergotine was given at intervals for the next four days, and food administered freely. He was kept in bed and morphia continued for several days, with chloral at night, sufficient to secure long periods of sleep. He recovered perfectly in a week.

Another case occurred in the same locality in the person of a young woman, who had been engaged for some time to a man, who formerly lived near her, but had gone West and engaged in business. Her family were in moderate circumstances and of an intelligent though not a strong race. Her lover came on at the appointed time; they were married and soon left for their new home in the far West. She had not slept well just previous to her marriage and had worked very hard to have every thing in readiness to leave her home. Before reaching their destination, and in less than a week after her marriage, she told her husband she did not love him and that she had committed a great sin in marrying him, that she was leading a life of shame in staying with him, and refused food. When he brought her to my office a few days later, she was pale, pupils were dilated, but her pulse and temperature were not disturbed, though composed, she reiterated her delusion, and said she dwelt constantly on the subject of suicide. This condition lasted about six weeks, with delusions, apprehension of impending evil, sleeplessness, insufficient or forced alimentation, and mental distress, and was followed by recovery. Sedatives to the extent of obliterating her painful sensations, hot spinal baths, followed by brisk friction, and later by central galvanism, ergotine, stimulants and forced nutrition were ordered and a recumbent posi-

tion so far as possible was secured. Very little in the way of opiates or sedatives after the first few days was necessary. Within the same week the husband of this patient brought his own sister to me from Iowa. She was in the same mental state and had attempted suicide, but recovered under the same management and in a much less time than her sister-in-law had done.

The point I would make in this class of cases is this: Where the general health is fair and where the onslaught is rapid, it is sometimes necessary to lower the mental tension and even to dull the sensibilities to the point where painful sensations abate, and to secure prolonged sleep in order to allow the natural mental processes to be restored. Morphia and preferably the bromide salt because it disturbs digestion less and controls mental activity better, is always safe. This need not be continued long, sometimes with it chloral, in small doses, may be given at bed-time and in all cases of insomnia with muscular restlessness, the hot spinal bath followed by brisk friction is useful. Before the morbid impressions are firmly registered, many patients may be urged to employ themselves in some kind of work, and thus gradually the mind may be guided by the body until it is restored. In a larger proportion of cases the onslaught is less rapid and the deterioration on both the mental and the physical side is so slow as to render any abortive measure useless. The depressing delusion usually becomes defined and firmly registered before any active means are taken to arrest the disease, and the duration of the attack then will not be less than three months, usually not less than six. The same general mental symptoms will be found—apprehension, suspicion, sometimes hallucinations, such concentration of mind on self as to make the patient indifferent to business and his surroundings, and usually a tendency sooner or later to suicide. I do not think the form of delusion is of much consequence and that this feature makes it worth while to classify melancholia into suicidal, homicidal, religious, etc., for the same case often, and indeed usually, if it runs a long time, passes through many if not most of these phases. In these cases it does no good to attempt to divert the mind into a state of health. Forced exercise of some sort is often a necessity to preserve the bodily health—but anything like travel as a cure is always a failure, and not only so but fraught with dangers no physician

can afford to brave. The introspection is so marked that the ordinary objects of interest in travel are not even seen, and the excitement and fatigue only make matters worse. No attempts to deceive or circumvent or cajole the patient pay in the long run. It is better to state the case fairly, to point out its dangers, to dwell on its good points, and in this manner to cause the patient to summon up all the self-control possible to promote your own plans for his restoration. Few persons ever become so insane as to lose all self control. A straightforward earnest manner, with patience enough to hear the statement, and firmness enough to check reiterations, and to calmly correct misstatements, and to point out delusions as they arise, will usually secure the confidence of the patient, so that you need not be surprised by sudden outbursts of violence or by attempts at suicide. Without his utmost confidence, it is unsafe to carry the responsibility of a melancholic while he is at home. In the majority of instances of shocking tragedies, which occur oftener in melancholia than in all other forms of insanity combined, the full extent of the delusion has not been appreciated, in fact a careful diagnosis has not been made. It would be easy to illustrate this part of the paper with most thrilling cases did not the secular press make such sensational narrative superfluous.

The medical treatment must aim, of course, at restoration of bodily health, together with such remedies as may be necessary to improve the condition of the circulation. After the first few weeks hypnotics are rarely required with any regularity, though at first they are often a necessity. Combinations of lactucarium, valerian and virburnum are best for this latter purpose, with the addition of small doses of chloral at bed-time if necessary. These remedies during the day, without the chloral, will often add much to the comfort of the patient. If restlessness to the extent of exhausting the patient comes on, then the addition of minute doses of bromide of morphia $\frac{1}{20}$ to $\frac{1}{30}$ grain four or five times a day is useful. The tonic effect of these small doses of morphia is very marked, and either with other tonics or with the nerve sedatives mentioned is an important part of treatment. As to tonics, I do not think there is anything new of much value. Coca and its preparations are disappointing, as are Tokay wines. Cod liver oil ranks first, followed next by

arseniate of soda in small doses, bichloride of mercury in combinations with quinine, perhaps, and the phosphates—of which there are so many admirable preparations. For women especially the acid phosphates in a little Tarragona port wine answer admirably. When the circulation is so sluggish that the capillaries become distended, and the skin and lips and finger-tips are turgid, cool salt-water sponge baths followed by massage or galvanism answer an excellent purpose. In all cases, however, where it is not possible to obtain the confidence of the patient so that the mental processes are fully known to the attendant, or where there is persistent refusal of food, or such strong suicidal or destructive tendencies as to require minute watching day and night, it is better to remove the patient to an asylum. In all other cases that can not receive careful attention at home for a long period, it is better not to make the attempt of home treatment.

The prognosis is more favorable, however, than in most other acute diseases if managed properly either at home or at an asylum,—more so than in scarlatina, pneumonia, the majority of the fevers or the inflammatory affections of the brain and its membranes. Cases of mental depression without delusion in which the emotions are at fault, have some characteristics that distinguish them from melancholia proper, aside from the question of delusion. They are oftener due to reflex influences. There is less impairment of the general health, and as a case goes on there is less liability to exhaustion and to graver conditions; the patient often sleeps well, is more demonstrative and voluble, more inclined to weep, there is more confusion of ideas, less liability to concentrate the thoughts and the depressing notions are not fixed, but change rapidly. That this is a true melancholia, a condition of mental pain, best described as a state of mental depression, rather than by the term neurasthenia or hypochrondriacal melancholia, is to my mind obvious. The condition is mainly made up of painful mental symptoms, though there be no perversion of the intellectual faculties, there is a loss of the power of concentration and a sustained mental effort is impossible.

Any attempt to classify the feelings and great variety of sensations described becomes confusing. If, however it be borne

in mind that disturbed emotions, with the element of expectancy added, can generate sensations of every variety and intensity, there will be no difficulty in establishing a diagnosis. Only a few weeks ago, in a neighboring county, I saw a man, who had been in bed for six weeks and was in a pitiable condition of mental depression, with apprehension, loss of hope, and who said he had at first phlebitis about the ankle, and ever since had been distressed beyond measure, by the floating bodies of fibrin which started from this spot, ran up the leg and directly into the heart, giving him palpitation, fainting and a sense of suffocation. He had not dared to walk. When assured he was wrong, that there were no veins where he felt the sensations, and that he might get out of doors at once, he began to improve, and with cod liver oil completed his recovery in a few weeks. Another patient was so tormented by a sense of trembling or shaking in the abdomen, whenever her mind was not occupied, that she suffered the greatest mental anguish, and though she slept and ate well, it was with the greatest difficulty she could be kept up. Another lady of sixty, after great grief on account of the loss of a daughter, and anxiety regarding her husband's illness, passed into a state of profound depression, with morbid apprehensions, fear of death, of some further loss in her family of heart disease, after having remained six weeks in this state recovered. Illustrations are plentiful but are unnecessary here, further than to characterize the condition.

This is the field in which all sorts of medical impostors have reaped their richest harvests. The faith cure, prayer cure, mind cure, magnetic cure, water cure, electrical cure, and all such deceptions, find among such sufferers willing dupes. It seems to me this is largely due to the fact that the real suffering of these patients is not always appreciated, that without finding lesions physicians are apt to dismiss the invalids with the remark that nothing is the matter, and it is only a whim. Sensible people, however, suffer in these ways as often as the weak-minded, and this depressed mental condition with disturbed emotions, ought to be treated as well as pneumonia or fever. In the first place, change of scene, of occupation, and habits of life is the most important element in management. Unlike the depression with intellectual perversion, travel is always advantageous. Mental

rest does not mean total suspension of mental activity, but a change in the habits of thought and a release from enforced application. A thorough search must be made for physical ailments that may give reflex disturbance, and if the trouble can not be removed, then such an explanation, in plain terms, made to the patient that he may have sufficient facts to give him a clear understanding of the trouble; this will do much to restore him. Perhaps the most common as well as the most alarming of the symptoms of this state are referable to the heart—either palpitations, irregularities, or excessive rapidity of the heart. These symptoms are usually controlled by small and repeated blistering in the region of the roots of the accelerator cardic nerves, or by a strong galvanic current of electricity passed from the region of the shoulders to the feet. The direction of the current is entirely immaterial. The valerianate of zinc with ergotine, and sometimes the minute and frequently repeated doses of morphia bromide are not only palliative but curative agents. Alcoholic stimulants are also of great value, given an hour after meals and at bed-time, though more than ordinary caution is necessary to prevent these patients taking undue liberties with the prescription. The nutritive tonics and forced alimentation to the utmost capacity of perfect assimilation are necessary.

I regret very much that the time allotted will not permit my going more into detail in the matter of medical treatment, and that it cannot be illustrated by cases. My main desire, however, is to emphasize the following facts: That a careful diagnosis ought always to be made in cases of mental depression; that where there is intellectual perversion it does no good to attempt to amuse or divert the patient out of his sickness, or to advise travel; that some cases of sudden onslaught ought to have sedatives early to diminish sensibility, and thus to abort the disease; that in every instance of failure to obtain the fullest confidence of the patient, or where there are persistent suicidal attempts or long continued refusal of food, it is better to place the patient in an ayslum; and, finally, that the more simple cases without delusion, but with disturbed emotions, are improved by change of scene, travel and diversion, with appropriate medical treatment.

THE STUDY OF DERMATOLOGY IN BERLIN.

BY ERNEST WENDE, M. D., B. S.

For Germany, "Friedrich-Wilhelm's-Universität" is comparatively a young institution, having been founded in 1809. On the 15th of October the following year Hufeland delivered the first medical lecture. Then, the faculty consisted of six ordinary professors, one extraordinary professor, and seven privat-docents, with a class of one hundred and seventeen students. To-day it contains many of the most distinguished minds in our profession, and as a unit it is undoubtedly the most celebrated body of instructors of medicine in the civilized world. Their number has augmented to fifteen ordinary professors, twenty-six extraordinary professors and fifty-eight privat-docents, with a following of twelve hundred medical students, among which America has a fair representation. The ordinary professors constitute the faculty proper, viz:

Prof. Von Langenbeck—Emeritus.
" Virchow—General pathology and path. anatomy.
" Du Bois-Reymond—Physiology.
" Bardeleben—Surgery.
" Von Bergmann—Surgery.
" Liebreich—Pharmacology.
" Waldeyer—Anatomy.
" Koch—Hygiene and bacteriology.
" Schröder—Obst. and gynecology.
" Gusserow—Obst. and gynecology.
" Leyden—Theory and practice.
" Gerhardt—Theory and practice.
" Hirsch—Special pathology.
" Schweigger—Ophthalmology.
" Westphal—Psychology and neurology.

They conduct all examinations for the degree of Doctor in Medicine as well as the more severe state examinations which are an additional requisite, providing the applicant desires to practice the art within the German Empire. The Department of Dermatology had its origin in 1825, when Dr. Kluge opened a clinic for syphilis. After his death in 1844, Dr. L. Schmidt was appointed, who in 1848 resigned in favor of Gustav Simon, a most talented specialist.

In the year 1853, Felix Von Bärensprung took charge, whose name is inseparably connected with the disease herpes zoster, which he so fully and accurately described.

In connection with the clinic for syphilis, at the suggestion of Schönlein, the discoverer of the parasite of favus, which still bears his name—the Achorion Schönleinii—there was established in 1858 a clinic for disease of the skin. After Von Bärensprung's death in 1865, Prof. Lewin, who introduced the subcutaneous injection of corrosive sublimate for the treatment of syphilis, was called to fill the vacant chair. In 1884, for reasons not at all scientific, but purely political, the professorships of dermatology and syphilis were suddenly separated, and, against the protest of the entire faculty, Bismarck's body physician, Schweninger, was appointed by the "Unterrichtsminister" as extraordinary professor of dermatology, and Lewin was retained as extraordinary professor of syphilis. The clinic is found in the "New Charité," with an abundance of material especially rich in syphilitic affections.

In 1879, Drs. Behrend and Lassar were appointed as Privat-docents for diseases of the skin. The same year Prof. Köbner, owing to ill health, resigned the professorship of dermatology at the University of Breslau, and removed to Berlin, where he after regaining his health in 1884 established his polyclinic for the treatment of cutaneous affections. Although not connected with the University, it offers great advantages to the dermatological student. It is located on Friedrichstrasse, one of the principal thoroughfares of the city. The number and diversity of cases seen here is great. He is assisted by two well qualified physicians, Drs. Staub and Saalfeld. His ability as a dermatologist is second to none. On account of his zeal in his work, his scrupulous regard for facts, and wide knowledge, his opinions always command attention. From his many contributions to dermatological literature his reputation has extended beyond his own country. Among his more classical works, we may mention the "Klinische und experimentelle Mittheilungen aus der Dermatologie und Syphilidologie"; "Ueber Sycosis und ihre Beziehungen zur Mycosis tonsurans"; "Zur Aetiologie der Psorias", and "Das Eczema marginatum, ein neuer Beitrag zur Mycosis tonsurans"; every page showing his individuality, his careful research.

The polyclinic of Privat-docent Behrend is situated centrally and within a short distance of Charité. He is an excellent diagnostician, and a painstaking teacher. With an appreciation of the importance of the manner of instruction, he has a method peculiarly attractive and highly commendable. The student is required to examine the patient, to describe accurately the lesions found, to differentiate in diagnosis and to prescribe with intelligence. If an error is rife, criticism surely follows, either by instructor or some member of the class. He is also author of the text-book, "Lehrbuch der Hautkrankheiten" in which all subjects are treated with remarkable fulness and clearness, displaying the same care and discrimination which characterize his teaching, and seeming in all respects trustworthy.

Dr. Lassar's polyclinic, although a private institution, is so designed as to serve the double purpose to teach and to treat, so arranged in technicality as to admit rich and poor, and so devised as to offer an opportunity to physician and student to perfect himself in practical dermatology. The building lies within the medical quarter. First opened in January, 1884, and since then more than 6,000 patients, from all classes, partly ambulatory, partly stationary, have frequented its halls. Besides the students of the university, over 200 physicians have listened to the lectures. The material used for demonstration is composed chiefly of the poorer classes, laborers, soldiers, rail-road employees, letter-carriers (these individuals are all poor in this country) as well as poor skin-diseased patients from other clinics and hospitals. The upper stories of the clinic are occupied by the sick. The apartments are so grouped that for every three rooms there is a bath-room, also an arrangement for a permanent massage-bath (massage-bett). The waiting-room with its furniture is hotel-like. For the necessary social comforts one finds a parlor, dinning-hall, and library.

The lectures, operations and treatment of transient patients take place in a polygonal and well-lighted amphitheater. In accordance with the present principles of antisepsis, the walls are painted with oils, the floors varnished and inlaid, the furniture movable and easily cleansed. All medicines, instruments and bandages are on glass or metal servers. The irrigators are glass

bottles with cotton-wad stoppers placed upon movable frames immediately beneath the ceiling. The removal of all waste is accomplished by bucket system.

As there is a tendency for micro-organisms to adhere to towels, only small napkins are employed in washing by physician and student, and when once used are replaced by fresh ones, the main principle observed being the most painful cleanliness. Especial attention is given to baths. These are heated by a furnace in the basement from which the water ascends in pipes into a reservoir in the fifth story, and from here flowing down so copiously that twenty-five baths can be given simultaneously, besides having at all times an abundant supply of water everywhere at hand. The permanent or continuous water bath, constructed to conform to the plan of Hebra's model, which consists of a bath-tub of galvanized copper framed in polished American pitch-pine, with an ingenious arrangement of fastening a swinging sheet at one-half the height of the water, upon which the patient inclines, his head resting upon an air cushion. In this comfortable position he may be raised, lowered or turned to one side or the other at will, while at the same time he is surrounded by running warm water, the admission of which can be regulated as desired, and without trouble. He soon accustoms himself to the remaining in the water. He feels as if in bed. Here he eats, sleeps, reads, etc., sometimes for weeks.

Cases of extensive burning and ulcerations, ulcerating tumors, operated fistulas, and the severest cases of eczema and phemphigus find, in this manner, great relief.

For private persons who cannot dwell in the clinic, there is arranged, in the first story, a number of medicinal baths, intended for chronic skin diseases, such as psoriasis, mycosis and syphilis. Here, in addition to a large salon where patients may rest, lunch before or after the bath, we have two separate departments, the one intended for ladies, the other for gentlemen. These are again divided into numerous cabinets, some for toilet, others for perspiration, massage, inunction, and bandaging. The baths are made of white-enameled iron, surrounded by a masonry of white and blue tile and set in brightly-polished brass. The patient sees at a glance that the requisite cleanness is regarded. To give bathers support

as to special diseased parts, straps are stretched across the bath, hanging from and attached to brass clasps. In this way the person may be allowed to float in the water.

The patients are under the constant supervision of physicians, in order that the treatment may be modified daily if necessary, according to the state of the disease. The service is in the hands of a well-trained *personnel* of attendants of both sexes. During the lectures, the listener is urged to a continued observation of the various cases, for an unprejudiced study of their course and the effect of the remedies employed. Special stress is laid upon diagnosis and therapy. In consideration of the difficulty of predicting the effect of a dermatological remedy in single instances, special emphasis is attached to the individualizing of cases. With an abundance of material on the one hand, and the presence of a bacteriological laboratory on the other, there is always an opportunity offered for microscopical and experimental work and original investigation. There are given special hours for the treatment of diseases of the urinary apparatus. Dr. Posner has charge of this department where all surgical operations are performed, as, for example, the excision of the initial lesion, the removal of glands, the amputation of tumors, and the like. The larynx and eyes are examined in darkened rooms. In short, everything is done to answer the demands of the patient and the requirements of the student.

The American student at once recognizes the frequency and importance of a certain number of affections relatively rare at home. He is fairly startled with scabies, sycosis and phthiriasis. On one occasion, while speaking of the frequent occurrence of sycosis, the instructor said, "Yes, it is our daily bread," and to further harmonize my inquisitive mind, he finally told me that at present it was raging as an epidemic. But as this malady owes its origin to a parasitic fungus, generally acquired in barber shops where cleanliness is wanting, I fear it will always have those characteristic conditions appertaining to an epidemic, unless the tonsorial custom of wiping twenty or more different faces with the same towel be abandoned. Reform in this particular is actually needed in Germany. They are not acquainted with the comfort, ease and cleanness found in an American barber shop.

As for scabies or the itch, par excellence, the cases are numerous, especially among the lower classes, being generally complicated with certain secondary eruptions, as papular and pustular forms of eczema, furuncles, or abscesses with many crusts and scratch-marks, the whole exhibiting a peculiar polymorphous appearance. In the United States this disease is quite rare, according to Dr. Bulkley, of New York. Among 8,000 cases analyzed, it only formed 0.39 in private, and 2.18 per cent. in public practice. The three forms of phthiriasis are abundantly represented, of which some of the cases of phthiriasis capitis are of special interest; yet, rare among adults, but common enough in childhood. The scalp, from vigorous scratching, becomes excoriated; a bloody serum oozes from the wound and crusts form. The hair is matted together with nits attached. The insects move in various directions. The post-cervical glands are swollen and painful. The head emits a disagreeable odor. The whole is a loathsome, vitalized mass.

Then again lupus vulgaris plays a greater *rôle* in the dermatological clinics here than in those of New York or Philadelphia. The number of cases are manifold, while the seat of lesion varies. Besides overspreading the nose and the cheeks, and sometimes the upper lip in part, one sees instances where the point of lesion involves the mucous membrane of the nose, buccal cavity, larynx or epiglottis. Again, other cases may manifest its localization upon the neck, trunk or extremities. I may mention one case from the clinic of Dr. G. Behrend of a small girl, aged 13, where the disease was rooted on the dorsal surface of the right hand, causing an interesting deformity. The phlanges of the index and middle fingers were reduced to one-third of their natural size, while their articulations were not at all interfered with, as the function of movement seemed quite intact. The finger nails were also normal. Cases of psoriasis, prurigo, and even of lichen rubra are also frequently met.

Another stubborn fact which presents itself to the American student is the convincing severity of certain affections as compared with those of his native country. Prurigo, a disease so exceedingly rare with us, is occasionally seen in its most aggravated form. The patient is covered with a more or less general brown pigmentation with numerous papules. The skin is infiltrated and thickened.

On touch it reminds one of a rasp or grater. The lymphatic glands are engorged and swollen. The inguinal glands may attain the size of a fist, hence the name prurigo bubo. The axillary glands, too, are frequently much enlarged. The itching is most violent and incessant, producing sleeplessness, followed by emaciation. In the polyclinic of Prof. Köbner I have witnessed the severest types of psoriasis universalis and pityriasis rubra. Also, through the kindness of the professor, I had an opportunity of seeing in his private practice that extremely rare disorder, mycosis fungoides.

With due regard to justness, I shall not attempt to judge as to the relative frequency of syphilis. However, the manifestations of the primary lesion upon or about the lips occurs repeatedly, more frequent than I have seen it in our larger cities. Besides, I recall two other striking cases, one where the initial induration was on the index finger of the right hand, remarkable as the individual was neither physician or midwife. The other was localized near the instep of the right foot. As to its virulence, the cases as a rule are much milder. This is owing in all probability to a combination of the following facts:

1st. Astringent law requiring the registration and examination of prostitutes.

2nd. The number of clinics offering gratuitous treatment.

3rd. The greater regard shown towards antisepsis.

4th. The method of treating patients hyperdermically with corrosive sublimate.

Concerning the system of therapeutics, this varies somewhat at the different clinics, each having some favorite method of its own, some favorite remedy selected from experience. In conclusion, I will add that the recent introduction of lanoline as a new basis for ointments, and the more recent production of a neutral soap by the process of centrifugation, both discoveries of Prof. Liebreich, the father of chloral, seem destined to rank high in the future therapy of dermatology.

Berlin, March 11, 1886.

VERATRUM VIRIDE.

ITS PHYSIOLOGICAL AND THERAPEUTICAL EFFECTS.

BY J. B. GROSVENOR, M. D.
Buffalo, N. Y.

[Read before the Buffalo Medical and Surgical Association, May 4, 1886.]

The ultimate object of the true physician in the practice of his profession is the prevention and cure of disease. Fifty years ago the heroic treatment of human maladies bore sway over all others. Calomel, jalap, tartar emetic and the lancet played a prominent part in the therapeutical forces wielded by the Æsculapius of that day. The timid wight who could not purge drastically, vomit surely, and bleed copiously, was regarded as a poor representative of his class, and was soon remanded to the shades of oblivion by professional brethren and by the laity. Those who believed in the all-conquering power of medicine were in the majority. According to their philosophy dame Nature played only a minor part in the cure of diseases to which human flesh was heir. Drugs were in the ascendant; *vis medicatrix naturæ* was left in the lurch. Gradually a broader and deeper faith in the curative power of nature sprang up and an almost unlimited confidence in roots, herbs and minerals as health restorers loosened its grasp on human credulity, till therapeutical teaching from the professorial chair and by the wayside amounted to scarcely more than a recommendation to depend upon physical rest and the healing properties of Father Time.

During the half score of years just past, we have been hearing much of preventive medicine and hygienic conditions. The attention of the physician has been strongly turned towards the prevention of disease. New avenues have been opened in search of whatever germs exist in earth, air and water, and have been followed with commendable assiduity. Boards of health have been established for the purpose of superintending the public health, preventing the inception and spread of disease, for so controlling the chemical elements of nature that they will produce upon the human body the least possible injury. These health boards have been doing a grand work throughout our land, and we welcome them to still higher and wider usefulness.

Amid the urgent calls to a dependence upon the curative powers of nature, to preventive medicine and hygienic relationships, we ought not to forget that medicines have special and proper relations to disease, as curative agents. We are not to lose sight of the facts that we are coadjutors of nature in relieving our fellow-men of their manifold and distressing maladies, that certain forces have been placed at our disposal for whose right use we are held responsible by our Creator, that standing face to face with the monster Death we are to do our utmost to combat his attacks and avert the threatened doom of his victims.

The physician may be an accomplished anatomist, a skillful surgeon, a learned pathologist, an unerring diagnostician and at the same time a very ordinary therapeutist, and being this he fails to reach the goal towards which all his other professional attainments have been leading him. A knowledge of the application of remedial agents to diseased conditions is indispensably necessary to the successful practitioner.

With all our boasted knowledge of the human system and our acquisitions in science we have not yet discovered the scientific law upon which to build a therapeutical science. The specifics in medicine can be counted upon the digits of a single hand. Experience and fact are still wanting upon which to build a scientific superstructure of therapeutics. More minute and accurate observations upon the action of individual remedies upon each diseased condition of the human system should have a larger place in our thoughts and a firmer, more continuous hold upon our time and talents.

In the interest of therapeutical science permit me for a few moments to call your attention to that somewhat old and too little used remedy, Veratrum viride. It shall not be my attempt to throw any new light upon the mode of action of this important therapeutical agent; nor shall I weary you with a detail of cases in which I have found it useful. I wish merely to enforce old truth, and if possible enable it to stand out so prominently before you that if you have not already recognized the utility of this remedy you will in the future call it a most efficient and reliable friend while you are ministering at the bedside of the sick.

The plant Veratrum viride belongs to the botanical order styled

melanthaceæ. Many of the species of this order of plants possess poisonous qualities prominent among which is *colchicum autumnale*, and hence the order is sometimes mentioned as the colchicum family. How does this plant look? What is its personal appearance? You have observed it as in younger days you have followed the streams of your native township or tramped through the meadows and lowlands of your father's farm. It flourishes over a wide extent of latitude in this country—from Canada to Georgia. It leaves the low banks of the creek and joyfully takes up its abode in marshes and meadows. Growing from two to four feet in height it often holds quite a prominence amid the grasses and humbler plants that surround it. You ask your companion of larger growth the name of this conspicuous plant, and he informs you that it is the false hellebore or American white hellebore—and that it has other names, perhaps even more common and better known—such as swamp hellebore, Indian poke, poke root. It can boast of no beauty—has no unusual charm for the æsthetic eye—no remarkable grace in form, and no wonderful brilliancy in color. Its grace of outline is only stiffness and uniformity. Its flowers which are thrown out in the months of May, June and July, are of a yellowish-green color—neither very pleasing nor attractive. Its stout, stiff stem rises straight towards heaven, with a proud, defiant look, like many of the unbending, Pharisaical human species who are treading their selfish, lonely way towards heaven without regard to the salvation of other men. The stem is relieved of its stiffness by large, coarse-looking, sheathing, triple-ranked leaves, and by flowering axillary racemes which rise at the top of the plant into a panicle, pyramidal in form. The general appearance, then, of Veratrum viride is that of a coarse, stiff plant—almost devoid of grace and beauty, but standing firm and immovable in its native swamp—especially conspicuous from its broad leaves and erect attitude.

The part of the plant used for medicinal purposes is the rhizoma or root. It has been used in the form of powder, tincture and fluid extract. Its active properties are due to the two alkaloids, jervia and veratroidia.

PHYSIOLOGICAL EFFECTS.

Veratrum viride is a thorough and effectual emetic. The vomiting which occurs from emetic doses is violent and sometimes difficult

to control, and under such circumstances the depression of the general system is so great that as an emetic it can hardly be regarded as a safe remedy. Consequently, the area of its usefulness in this direction is exceedingly limited. Rarely this medicine has a purgative effect. The power which Veratrum viride has of affecting the movements of the heart and the tone of the muscular system is its special characteristic, and the one to which I have wished to call your particular attention at this time. It affects the pulsations of the heart in two ways. First, it reduces the number of heart-beats. Second, it lowers the force of the heart-beat. The number of cardiac pulsations may be reduced to fifty, forty or even thirty-five. As the pulsations are reduced in number their force is lowered to a corresponding extent. Under the influence of extremely large doses, the patient becomes greatly weakened; the body is covered with a cold sweat and temperature is reduced. Faintness, dimness of vision, coma and insensibility occur, and yet with this array of alarming symptoms rarely has death taken place. After suspension of the medicine under such circumstances, and a free use of stimulants, these symptoms are quickly removed. Doubtless the vomiting that generally supervenes upon the administration of large doses explains this comparative immunity from serious disaster.

Experimentalists have shown that the power of Veratrum viride is dependent upon its two alkaloids—jervia and veratroidia. The emetic qualities of the plant are mostly due to the veratroidia. Both of the alkaloids exert a depressing influence upon the functions of the spinal cord, thereby destroying to a greater or less degree its reflex activity. By this means the blood pressure is lowered, the tone of the vaso-motor system is diminished and the cardiac muscle is paralyzed. These alkaloids produce death by asphyxia. The muscles of respiration are paralyzed. Veratrum viride seems to expend its energy upon the functions of the spinal cord. The cerebral system is scarcely if at all affected by it.

THERAPEUTICAL UTILITY.

As we take this remedy into our hands to use for our patients, one of the first questions which naturally arises is, "What form of it shall I use?" The form generally used, I believe, and which has been invariably used in my own practice, is the tincture, and that

which is known as Norwood's Tincture. In the use of this remedy we should keep before us the admonition that its range of usefulness is not very broad. Veratrum viride is not a panacea. It is not to be exhibited for every form and shade of human ailment—from chilblains to Asiatic cholera. Its usefulness is limited when compared with many other agents of the materia medica. We should also remember in dispensing this remedy that it is powerful for good or for ill. Some good angel should be constantly at our elbow to admonish us of this fact. A mere tyro in the knowledge and use of this potent agent will find himself punished for his temerity, or disappointed by his timidity. I know of but few remedies that demand on the part of the practitioner more care, more thoughtfulness, more precision. Do not allow the nurse to give it according to her own inclination and judgment. The fate of your patient depends upon your own attentive skill and careful watchfulness. Under but few circumstances does a patient need more frequent visits and more untiring attention than when under the influence of full doses of this medicine. Do not leave your patient to unknowing and unskillful attendance, for several hours together, but be a frequent watcher at the bedside, that you may guard against any results other than those you have been warranted to anticipate.

Can any general rule or rules be given to guide us to a proper exhibition of this remedy? It should not be given in any depressed condition of the circulation, nor in any weakened condition of the heart. Unless this rule is observed with rigidity a depression so deep and rapid may result as to be dangerous to life. It may be said in general that in those conditions which are the product of a rapid heart-beat and a distended circulatory system, veratrum has its most positive utility. Of course there are certain exceptions to this general rule as there are to most rules.

Given a rapid, strong, full, bounding pulse, and a high temperature, and the physician's attention should be strongly turned towards veratrum as the lever which will lift his patient out of existing troubles. In certain diseases it is inadmissible, even though there may exist the state of things just described. Its emetic and purgative properties forbid its use in gastritis and peritonitis. In these diseases it would be hurtful rather than helpful. Its good effects

would be overbalanced by those which are injurious. Neither has it a proper place in those cases which suffer from valvular lesions of the heart. In this condition the heart has need of all the nervous power it can gather in order promptly to perform the work laid upon it. The heart has a herculean task to perform in supplying the general system with the proper and necessary amount of blood. Any agent which will weaken the cardiac nervous stimulus will hinder and destroy the very work which the heart is endeavoring to perform.

The use of Veratrum in typhoid fever is questionable. In this fever one great danger to be apprehended is the failure of the heart to perform its functions on account of the deficient supply of nervous force. The heart becomes partially or wholly paralyzed and death ensues. Under such circumstances the use of a cardiac depressant would seem to be contra-indicated even though it might exert an influence in lowering the pulse-rate and temperature. It is highly improbable that Veratrum has any influence over the course and duration of this fever.

I have now indicated a few conditions in which this remedy is contra-indicated. There may be many other circumstances which forbid its use, but I have called to your attention enough to show the necessity of a careful discrimination in the use of so powerful an agent.

Let us now turn our thoughts towards a few diseases in which its use has strong and positive indications, and in which it has a deserved and reliable reputation for good—a reputation founded upon sound reason and extensive experience. Like many other articles of the materia medica it has been lauded as almost a specific in many diseased conditions for which it has no utility. In our observations we are too apt to forget the curative potency of nature—that she as a good dame and nurse plays a large part in the restoration of our patients to health and soundness. Oftentimes as enthusiasts we draw conclusions from the *post hoc*, *propter hoc* argument and extol our favorite medicine and ourselves when the credit belongs to agencies least suspected. Passing time and more ex-extended experience scatter to the winds of oblivion our elaborate theories and formulated conclusions.

In simple hypertrophy of the heart Veratrum has been found a most efficient agent. Logical reasoning founded on existing knowledge of this abnormal condition would lead us to this conclusion. In simple cardiac hypertrophy the heart is doing more work than is necessary, more than the system demands. It works hard because it is strong and powerful. By its vigorous strokes it is wearing out and pounding in pieces the remainder of the physical system. A remedy is needed which will moderate these heavy blows. Veratrum viride is such a remedy; possesses an efficiency which has not been disappointing to the physician.

In that condition known as irritable heart, in which the heart has been disturbed by the excessive use of tobacco or by mental excitement this remedy has afforded marked relief. In aneurism Veratrum has been found to be a potent adjunct to various surgical appliances used for the cure of this lesion oftentimes so difficult of alleviation. The circulation is depressed, the blood is propelled with less force, the cardiac contractions are fewer in number. Coagulation of the blood is favored and the contents of the aueurismal sac are solidified. As it is necessary to use this remedy for the disease a considerable length of time, and as it is needful to render the pulse as slow as is consistent with safety, unusual care and skill must be exercised. The medicine should not be pushed to a degree which will produce vomiting, and the patient should occupy a recumbent position.

In acute congestions, of nearly if not quite all the organs of the body, Veratrum has an invaluable utility. As soon as the *congestive* has passed into the *exudative* stage its utility ceases. Employed at the commencement of acute congestion this remedy has a wonderful efficiency—indeed I know of no medicine which under these circumstances has an equal potency.

In acute mania it has also been found very useful. A hyperæmic condition of the cerebral circulation then exists which is relieved by an agent that will slow the pulse; the blood becomes equalized throughout the system, and the burden is withdrawn from the overloaded brain.

Active hæmorrhage is a condition which calls for a rapid reduction of the circulation. No more efficient remedy than Veratrum

viride can be found in the materia medica to accomplish this purpose.

The obstetrician is seldom placed in a more frightful and formidable situation than when brought face to face with puerperal convulsions. His fortitude and ingenuity are taxed to the utmost. Veratrum viride is one of his most useful weapons in combatting the enemy before him. I am confident that by its timely and heroic use in this dangerous condition many lives have been saved.

Permit me now to mention two diseases in which I have found Veratrum viride specially beneficial, diseases that are formidable in character, and often baffle the largest skill of the profession. I refer to acute pneumonia and to acute metritis. I am aware that much has been said and written upon the self-limitation of pneumonia. The assertion is made that being a self-limited disease its duration cannot be shortened by any means known to our art. It is difficult to prove the contrary of such an assertion. In a given case treated by medicine it is impossible to state its duration had it been allowed to run its natural course. My own observations teach me that in many cases in which little or nothing has been done to arrest their course a vigorous and judicious use of Veratrum would have abbreviated their duration and saved their victims from death. Of course one's own experience may be so petted that its value is overestimated and is regarded as well nigh infallible, but if we can place no reliance upon the lessons taught by our own history, why may we be expected to rely upon the experience of others?

Being called to a case of pneumonia in its initial stage you find a flushed face, a high temperature, a full, rapid, bounding pulse. Blood is being forced into the lungs in large quantities by the increased force and velocity of the circulation. The more blood carried to the lungs the more intense becomes the inflammation, the greater is the quantity of exudation poured out, and the longer time must it require for the exudation to undergo absorption. What, then, is clearly the indication before you? A sure and safe reduction of the circulation. Is there any remedy which will so fully meet all the indications of your patient's condition with a proper regard for his future welfare in the second and third stages of the disease as Veratrum viride? One drop of Norwood's Tincture given

every hour for six or eight or ten hours will work a wonderful transformation in his feelings, appearance and condition. As soon as exudation has taken place the utility of Veratrum ceases, and it should be stopped at once. It has no power to increase the absorptive processes of the system, and hence cannot remove the materials of exudation.

We are all aware of the formidable character of uterine inflammation; with what intensity and speed it rushes on oftentimes to a fatal termination in spite of the most skillful and heroic efforts of the attending physician. Acute metritis, from whatever source it may arrive, may very properly stir the practitioner into anxiety and arouse him to a most determined resistance against it. Nature calls for help and help must come at once or the victim will pass over the boundary beyond which all therapeutical measures are futile. It is not a time to stand and wait. The theory and plan of treatment by expectancy has no proper place here. The hot skin, the dry tongue, the pain, the tenderness on pressure, the strong, rapid pulse call for a quick lowering of temperature, and reduction of the heart-beat. Veratrum viride being in your hands I believe you have a safer and surer remedy to accomplish the desired result than any other known to the profession. Use it steadily, carefully, watchfully, and often the most gratifying conclusion will follow your promptness and decision.

The dose of Norwood's Tincture of Veratrum viride is from one to five drops. The best effects are obtained by administering small doses frequently. The general rule which I have adopted for guidance is one drop every hour, to be increased or diminished according to results obtained. This mode of administration will contribute to safety and efficiency.

Thirty-five years ago Veratrum viride was brought prominently to the notice of the profession by Dr. W. C. Norwood of Cokesbury, South Carolina. He boasted of it as a remedy superior to all others in a vast number of diseases. His enthusiasm respecting its virtues was almost unbounded. In pneumonia he regarded it as much a specific as quinine is now generally regarded a specific in intermittent fever. Time and test have considerably modified in the minds of medical men the extravagant opinions held by himself and his co-laborers.

In calling to your attention a few of the diseases in which this remedy is efficacious I have by no means exhausted the whole list in which it has been found positively useful. Besides a passing reference to some it has been my endeavor to enforce upon your consideration the results of my own experience in respect to two formidable diseases. Doubtless the indiscriminate use of Veratrum viride has caused its reputation to suffer. Being used in conditions to which it was inapplicable it has failed to accomplish the desired result, and hence there has followed a loss of confidence for those cases in which it might render efficient service. Its reputation has also been tarnished by an improper use in those conditions to which it was applicable. The utility of any remedy depends largely upon its proper use. This statement is specially true of those remedies that are powerful. The owner of a horse who has been acquainted with his peculiarities and powers for years can make him far more serviceable than a stranger. A constant use of a remedy for several years gives us a knowledge of its potencies and weaknesses—a control over it, an ownership in it, a skill in its exhibition not possessed by a mere novice. This is eminently true of Veratrum viride. A non-acquaintance with its peculiarities has oftentimes induced the physician to discard its use at the first symptom which seemed detrimental to the patient. A practiced eye would have discerned no cause for alarm but simply a harmless, natural sequence of the administration of the remedy.

In closing this hasty and imperfect sketch of my theme permit me to encourage definite and accurate observations of the action of individual medicines upon the human system. The human physical system is so complex in its composition, so varied in its activities, is subjected to so many different conditions of climate, custom and hardship, is played upon by so many external forces, is under the control of so many laws which we do not fully comprehend, that a wide range of observation extending over a series of years is needful in order to reach reliable conclusions concerning the complete therapeutical action of a single medicine. A *partial* view of such a field is misleading and conducts to false conclusions. If each observer stationed in his allotted position will fix his trained eye upon all the space of the extensive field which his vision can take in he

will be able to contribute at last a mite towards the large sum of therapeutical observations made in our world, and will thus be doing a grand work for true therapeutics. Is it not a fact that a lack of distinct observation is a great desideratum in the varied acquisitions of the majority of medical men of to-day?

In my day-dreams I have often wondered if research would ever penetrate the therapeutical veil which is suspended between the physician and such diseases as cancer and consumption. I have tried to peer into the future so far as to see the day when the searchers for truth shall have cleared away the rubbish of the present age, and shall have brought forth the therapeutical gold which shall stand the test of eternity. Can it be that the golden age is coming when a certain medicine or certain medicines shall have a sure adaptation to certain diseases? when such great scourges of the human family as consumption, cancer, cholera, yellow fever, shall be met and overcome by therapeutical specifics? Though living far distant from the Elysian Fields thus suggested, should it not be ours to aid in this glad consummation and thus live for generations yet unborn?

COCAINE WITH PHILOCARPINE.

One main drawback to the use of cocaine for producing anæsthesia of the conjunctiva is the dilatation of the pupil, and paralysis of accommodation, which it nearly always produces. Dr. H. W. Bradford, writing to the *Boston Medical and Surgical Journal* states that this effect can be avoided by the combination of cocaine with pilocarpine. He has found that the mixture of ten drops of a five per cent. solution of pilocarpine in a drachm of four per cent. solution of hydrochlorate of cocaine secures the anæsthetic effect of the cocaine, while leaving the pupil accommodation absolutely unaffected; while his experience has further warranted him in the statement that the neutralizing effect of the pilocarpine is constant and innocuous.—*Therapeutic Gazette.*

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CONCERNING EXPERT TESTIMONY.

In a most admirable paper in our May issue, Prof. Ansley Wilcox set forth, in concise phrases, just where the practitioner of medicine stands in the eyes of the law. Such a paper removes the last excuse for ignorance, on the part of those who read it, as to their rights and liabilities. Of course we need scarcely say that the less the doctor has to do with the intricacies of the law the more contented with his lot will he be. The writer of the "Comic Blackstone" has well said that men are beings supposed to be endowed with reason and free will; yet, when a man goes into court as plaintiff, it shows that he has lost his reason; and when he appears as defendant he is evidently bereft of his free will.

Nevertheless, there is a more important matter even than justice to the doctor, and that is justice in the abstract. And in the matter of expert testimony this justice can never be obtained with our present judicial machinery. The trial of a malpractice case by the average jury is a dishonest farce; dishonest because designing men can and do befog the minds of the jurymen instead of enlightening them, and a farce because the whole procedure is usually a travesty on justice rather than a scientific estimate of relative truth and error. The very method of selecting a jury to try such a case is of itself contemptibly ridiculous. It takes for granted that which is

palpably absurd; *i.e.*, that every man is equally capable of forming an opinion in matters which sometimes defy the best of scientific authorities. Does one take his newly purchased horse to a sister of mercy for an expert opinion as to its "points"? Does one entrust the construction of an intricate piece of machinery to a 'long-shoreman? Does one purchase expensive works of art of a clod-hopper? Notwithstanding, one *does*—because one *has to*—leave the decision of a case involving not only fine points of law and science, but reputation and thousands of dollars, to a collection of butchers, barkeepers, ward-bummers and men of like intelligence. What a commentary is this upon our judicial code!

Nor is this all. The average attorney is not content with calling men who are literally expert in their chosen field, but frequently endeavors to make up by the number of his witnesses that which they lack in quality. Or he contents himself with picking out some man of mediocre ability and posing him before the jury as an expert, having given him time to cram up upon a few set questions. It is notorious that men are frequently called as experts who have no right nor title to the claim. Thus, in a recent case in this city a gentleman made his appearance upon the stand in this rôle who said that the psoas muscle arose from the spine and was attached along the whole length of the femur, and who seemed unable to recall whether he had ever heard of the iliacus.

The case stands about thus: the competent witness is questioned by an attorney who, having devoted from one to five hours to a superficial examination of some text-book, considers himself competent to question and cross-question so pertinently as to elicit, not *all* the facts, but those facts which may help his side. The answers to those questions are rendered to a dozen men who, be they never so competent in their own spheres of life, are little more than blockheads in deciding questions of alleged malpractice or concerning the value of medical services. The whole proceeding takes place before a judge, presumably learned in the law, presumably ignorant of medicine or surgery, who, however, is likely to be as impartial to one side as to the other.

The whole system is an outrage, and can not be remedied one day too soon.

Of what shall this remedy consist? While there is much room for difference of opinion in framing an answer to this query, one may well say that anything worse than the present system could scarcely be devised, and consequently that almost any change would be for the better. Two general plans suggest themselves to us as we write. The first, the oft-suggested provision by which experts shall be called only by the court and shall be paid by the State. To this there are at least two theoretical objections; that the court might not call those who were really expert, and that the legal fee might be entirely inadequate. The State is willing to pay enormous legal fees, but is never known to place much pecuniary value upon medical talent.

The other expedient is somewhat similar to the custom which permits the court to name a referee or a master who shall take testimony, formulate an opinion and submit this to the court for ratification. If, in a given malpractice suit the court would refer the whole to a commission consisting of two *competent* physicians or surgeons, with one attorney, all three of whom should be utterly disinterested, before whom the case might be presented—if desired—by counsel, surely the ends of justice would be more quickly subserved than by any method of trial now in vogue.

Is it not enough to make one's blood boil with fury to read of such a case as that related in the *Pacific Medical Journal*, in which Dr. Graves, of California, was mulcted of eight thousand dollars, and this in a charity case? The evidence of ten well-known surgeons showed that the doctor intelligently and faithfully treated the case. Two doctors gave adverse testimony. One of these was nearly eighty years old, and had not read a work on surgery for thirty years. The other confessed that he had no experience in surgery. The doctor had attended the family of the woman bringing the suit against him, gratuitously, for sixteen years. The whole affair is a scandalous outrage upon the doctor, if the facts are fairly represented.

Besides protection from the average jury the doctor earns another well-deserved protection not at present afforded. It is notorious that not a few malpractice suits are taken "on shares" by disreputable attorneys. There ought to be some statute by which plain-

tiffs in such cases, or in cases, at least, that are non-suited or lost, should give bonds to indemnify the doctor against whom he fails to make a case, for loss of time, lawyer's fees, etc. Such bonds would not deter from suit in cases where there was genuine cause for action, while they would keep out of courts many of the cases that now disgrace them.

We consider that the Erie County Medical Society, which has already accomplished so much in securing good and correcting faulty legislation, could take upon itself no task more honorable and *apropos* than the framing of a bill calculated to remedy these crying evils of medical jurisprudence, and securing the passage of the same. This is not to be accomplished in a day, nor in a year, probably; but it may be secured in the end by persistent effort, and we know that the profession generally would give it hearty support.

DECOLLETE DRESSING AS DOCTORS REGARD IT.

The inevitable extremes of fashion have led, during the past winter, to that peculiar folly by which society women have aimed to display a minimum of dry goods upon a maximum of bust; the result has been that a fashion plate is but little different from an anatomical plate. It is the result, we suppose, of reaction from that dictum of society, or of *court* (as not long ago in Canada) which led women to dress as if they were affected with cynanche tonsillaris. They are in a fair way now to acquire that which they were then well protected against. A doctor who had just come from a dinner party was recently asked how the ladies were dressed. He replied: "Well, now, I give it up; I didn't look under the table."

In all ages of the civilized world satirist-poets have sung, moralists have preached, and physicians and hygienists have protested concerning the dangers which each saw menacing the transgressors of the natural law of dress;—and all, so far as one can see, absolutely without effect. The demands of fashion are like the religious prejudices of the ignorant fanatic,—too strong to be altered either by persecution or ridicule. Of these two weapons we deem the latter the stronger; and we have been not a little surprised at seeing it assumed, on the offensive, in the columns of that staid and

conservative contemporary of ours, the *Boston Medical and Surgical Journal:*

"To the medical man of serious tastes, who never, in whatever circumstances of frivolity he may find himself, forgets that he belongs to the gravest of professions, and who lets slip no opportunity of perfecting himself in the principles of the art, the prevailing mode of ladies' evening toilettes offers great possibilities.

"Dragged, perhaps unwillingly, from his sterner duties by the demands of social life, his time is yet not thrown away. Should surgery be his delight, he finds abundant facilities in the drawing-room or at the opera for viewing and reviewing topographical anatomy. The triangles of the neck are often most freely demonstrated by the very class of subjects in whom the anatomical landmarks are most clearly visible. There is more difficulty in studying the axillary space in its completeness, though its anterior and posterior boundaries, the pectoralis major and the latissimus dorsi, can usually be well made out. The advance of fashion has, unfortunately, not as yet brought under observation the other regions of great anatomo-topographical interest. While mechanically paying out his share of the small coin of social converse, the surgeon is really making the incisions for ligature of the subclavian, the brachial, and the innominate; he is considering how the appearances would be changed in case of a fracture of the coracoid process, or a dislocation of the humeral head, or of the sternal end of the clavicle. Perhaps he is planning out an operation for the ablation of the mammary gland. Who knows?

"If chest diseases are his specialty, he lays out the boundaries of the pulmonary lobes, wonders if the cardiac dullness extends further to the left than the line which his practiced eye describes as the normal boundary, and, upon the lady who stands in front of him, determines the proper point to enter a needle for thoracentesis. These opportunities are not to be lightly overlooked by any."

We wonder if a single lady could be frightened out of her customary anatomical display by the thought that some doctor was planning out upon *her* fair form the operation he was the next day to perform upon some poor wretch; in other words, was utilizing the animated manikin thus presented to his gaze.

A WELL-KNOWN laryngologist of Philadelphia has been sued for condemning in a public clinical lecture a proprietary catarrh cure! Verily the way of the honest man is hard. We hope that the doctor will win. The case is only another illustration of that injustice of the law which every man who tries to do his duty is sure to feel sooner or later.

THE NEW COLLEGE OF PHARMACY.

In the April number of THE MEDICAL PRESS we announced that the Council of the University of Buffalo had established a new department to be known as the Buffalo College of Pharmacy.

We are now glad to report marked progress by the new institution. Through the munificence of the Hon. E. Carlton Sprague, Chancellor of the University, Judge James M. Smith, the Hon. Elbridge G. Spaulding, and other friends of the college, the Faculty will be able to provide facilities for laboratory study which will be equal to those offered by any other American college.

The Buffalo College was the third in this country to make laboratory study in chemistry, pharmacy and microscopy obligatory, and this advance has called forth letters of hearty approval from those interested in pharmaceutical education. An optional course in practical botany, and a short course of lectures on pharmaceutical jurisprudence have also been provided for.

We heartily congratulate the faculty upon having secured Prof. Oscar Oldberg, of Chicago, as an addition to their number. With Prof. Oldberg pharmacy has been a life-work, and he is everywhere recognized as a writer and an authority of high merit. His greatest success, however, is as a teacher; and for the faculty thus reinforced we bespeak for the college that support which the efforts of its faculty and friends so richly deserve.

* * *

THE *Weekly Medical Review* tendered a banquet to the visiting editors at the recent St. Louis meeting of the American Medical Association. THE MEDICAL PRESS was not forgotten in the invitations, and its editor hereby returns his thanks for the fraternal courtesy. From all accounts those who attended had a most enjoyable time.

For the *Review* this journal must always have a most friendly feeling, since its editor was for some time—a few years ago—one of the editors of the former; and we have watched its progress with no small interest. Nevertheless, in the name of accuracy, we protest against its allusion to our friend Dr. Watson, of Jersey City, as the author of a *monogram* on amputations!

Some time ago we announced that the faculty of the Medical Department of the University had resolved to fit up a pathological and histological laboratory, and hereafter make systematic instruction therein a feature of the curriculum. It is with pleasure that we now announce that Dr. S. Y. Howell has been appointed lecturer on pathology and director of the new laboratory; Dr. Peterson having been obliged to give up similar work on account of his removal to such a distance. Dr. Howell brings to the position a reputation for thorough and careful work already established; he is, moreover, widely known as the authorized translator of Friedländer's standard work on microscopical technology.

Correspondence.

A NOTE ON THE THYROID GLAND.

Editor Medical Press:

Dear Doctor—In spite of the large number of experiments made to determine the function of the thyroid gland, we seem to be as far from a correct solution of the problem as ever, and the conflicting opinions with their vast arrays of *pro's* and *con's* do not permit us to arrive at any satisfactory conclusion. We find those who, on the principle that every portion of the body performs some function necessary for the well-being of the whole, claim that thyroid glands, even if we know nothing definite about their value in the animal economy, must be classed either among the blood-elaborating glands, or among those that have to perform some secretory or excretory function; and truly, if we are willing to admit the necessity of their presence, we cannot experience any difficulty in classing them under any one of these headings. On the other hand we have investigators who look upon the thyroid glands as remnants of the hypobronchial grove, necessary at some previous period of the evolution of the animal kingdom, but useless now and therefore slowly disappearing.

Equally conflicting as the theories with regard to their functions are the statements as to the effect of the removal of these glands, and in view of this uncertainty every fact that has any bearing upon

the subject should be recorded, for only by a slow accumulation of a large number of such facts can we hope to arrive at a satisfactory understanding of the problem at some future time.

Operations have been performed upon dogs, and after removal of the entire glands the animals have died with the symptoms of blood-poisoning; while others, in which small portions of the glands were allowed to remain, recovered; and the natural inference would be that the thyroids perform some excretory functions. To show, however, how the same experiments may lead to opposing conclusions the following note may prove worthy of record:

From three dogs, ordinary curs, picked up in the streets of Buffalo, I removed the entire thyroid glands on April 15, 19 and 22, respectively, and all three not only survived the operation, but did well and have been improving in flesh right along up to date (May 23), when they were used for other experiments. One of these dogs, the one first operated upon, deserves special mention, because he had the incision in the neck torn open twice; once, on the second day of the operation, through carelessness in handling, and again on the seventh day while fighting with his fellow-dogs; the wound finally healed by granulation. So if blood-poisoning was an inevitable result of the removal of the thyroid glands, this dog certainly would have been liable to suffer from it; but recovery, in each, took its regular course and none of them exhibited at any time any sign of more than ordinary illness; their appetites were good, they ran about and quite often demonstrated the soundness of their dog-nature by indulging in a pitched battle.

Of course these experiments do not prove anything and I simply record them as facts in the hope that they may be useful at some future time. Another point deserves to be mentioned in this connection. The original number of dogs set apart for these experiments was four, of which one died under ether through carelessness in its administration; but in all four the thyroid glands differed in size, ranging from the size of an ordinary white bean to two inches, while the size of the dogs varied but little.

The operations were performed by an incision in the median line, enucleation of the glands, tying of all the blood-vessels with silk ligatures and then removing the glands entire. The wound was

then carefully washed with a solution permanganate of potassium and finally closed with silk ligatures. Only one of the three incisions healed by first intention.

JULIUS POHLMAN.

Physiological Laboratory, Univ. of Buffalo,
May 29th, 1886.

Society Proceedings.

WESTERN BRANCH OF THE NEW YORK STATE MEDICAL ASSOCIATION.

Regular Annual Meeting, May 11th, 1886.

Reported by Gros. R. Trowbridge.

In absence of Dr. Moore, of Rochester, President of the Association, Dr. Green, of Buffalo, was chosen president *pro tem.* Dr. Thornton, the secretary, read a letter from the absent president, regretting his inability on account of sickness to attend the meeting.

Minutes of previous meeting were read and approved.

The Committee of Arrangements reported that there would be two sessions—one in the morning and one in the afternoon—and that a number of interesting papers would be presented.

In absence of Dr. Moore the president's address was omitted.

Report of Committee on Constitution and By-laws was made by Dr. Strong. Report was accepted and committee discharged.

Moved and carried that the new Constitution and By-laws be adopted.

Dr. Dorland made the report for the Committee on Membership.

The programme for the day, consisting of ten papers from various members, was read by Dr. Briggs.

The first paper was read by Dr. J. B. Andrews, of the Buffalo State Asylum. Subject: "A Case of Morphia and Cocaine Habit."

Dr. Andrews, after carefully narrating an extreme case of this kind which had come under his care, described the totally different effects produced by large and small doses of cocaine. He stated that in his opinion the use of the drug in excess was in every way as injurious as morphia; and, although he did not discourage

the employment of it as a therapeutic agent, he said that in its use the physician must be careful and guarded. In regard to breaking up the morphia habit he did *not* believe in the *gradual* discontinuance of the drug, but in prohibiting it entirely; and with good and careful nutrition and the guarded use of atropine, he had been most successful.

Considerable discussion followed the reading of this paper.

Prof. Roswell Park gave a half hours's talk on "Bacteria and their Cultivation." Dr. Park gave an interesting account of the varied forms of micro-organisms, and of the different media used in their cultivation, showing at the same time numerous specimens prepared by himself, exhibited for the first time in this section of the country, especially those of the various surgical infectious diseases, in which direction particularly he was working. Some of the specific germs of pus were shown, as well as those of erysipelas, anthrax, pneumonia, swine plague, typhoid, etc. After a brief description of the excessive attention to detail required in work of this kind, and a demonstration of some of the culture differences which one must note in distinguishing various apparently similar forms, he alluded briefly to the alkaloidal poisons formed by these organisms, to the bearing of a knowledge of these on the most important questions in the pathology of to-day, and closed with the assertion that the text-books on general pathology would soon have to be entirely rewritten in the light of knowledge gained from investigations now in progress.

After a brief recess Dr. A. A. Hubbell read a paper on "Congenital Occlusion of the Posterior Nares."

The paper was an exceedingly interesting one. Dr. Hubbell, after giving all of the reported cases of this trouble, carefully described one successfully treated by himself. It was voted that this paper be referred to the State Association for publication in its transactions.

At the afternoon session Dr. S. T. Clark, of Lockport, presented an obscure case of abdominal tumor for diagnosis.

Dr. H. R. Rogers, of Dunkirk, read a paper on "Cholera; a Neuroso-Hæmorrhagic Theory," which will appear in a subsequent issue of The Medical Press.

Dr. Geo. E. Fell, of Buffalo, read a paper entitled "Butter and Fats; their Adulterations and Methods of Examination with the Microscope." He showed the value and necessity for the use of the microscope in the examination of the crystals of fats and instanced the case wherein through the examination of the crystals of lard and tallow at Chicago in 1882 or 1883, the microscope settled the dispute when the chemical methods in vogue at the time, according to leading chemists, were inadequate to do so.

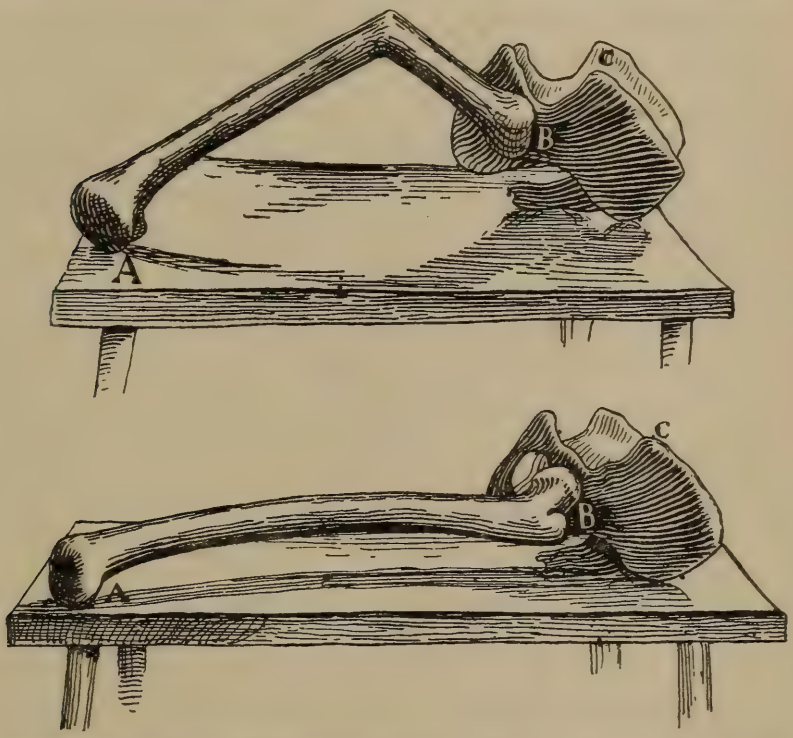
He gave some of the more prominent differences in the fats of animals as revealed by their crystals deposited through various methods, and the results of admixtures of certain fats, butter, lard and tallow, with its bearing upon the adulteration of butter. He detailed the methods of detecting adulterations of butter as suggested by Dr. Taylor, and mentioned some matters pertaining to the work of a committee appointed by the American Society of Microscopists at Cleveland, Ohio, to examine into the methods of Dr Taylor. The views of Prof. Weber, who claimed that Dr. Taylor's methods were of no value, were brought up, and the answers of Dr. Taylor and Mr. Vorce, which supported Dr. Taylor, given. In closing the doctor said, "Let me voice my objection to the unjust legislation which Congress appears to be ready to take, in virtually taxing to prohibition, the manufacture of butterine and oloemargarine. Articles which, when properly manufactured, are in my opinion as wholesome as butter, and which will replace in many cases, if sold for what they are, the lard which is often used on the tables of the poor. Let the full power of the law be invoked to control their manufacture and sale, but not prohibit the manufacture of articles of inestimable food value."

Dr. E. M. Moore, Jr., of Rochester, next read a report of a case of "Peculiar Luxation of the Jaw," which is promised later for THE MEDICAL PRESS.

The courtesy of the floor was extended to Dr. Lucien Howe, who exhibited a spaniel bitch and her brood of puppies, all demonstrating the heredity of cataract.

A communication was presented by Dr. U. C. Lynde, of Buffalo, on "Methods of measuring to ascertain amount of shortening after fractures of the femur," of which the following epitome is presented:

In every instance where there is an angle in the femur, the measurement taken from the anterior superior spinous process of the ilium is absolutely incorrect, and will give a false idea in regard to the amount of shortening. If the angle is anteriorly, the shortening shown will be too great. If the angle points posteriorly, the measurement from the anterior superior spinous process will not show the full amount of shortening. The reason for this arises from the fact that where the angle points anteriorly there are two



angles, measuring from the anterior superior spinous process. One, formed by the bend in the femur itself; the other, formed by the upper fragments approaching the anterior superior spinous process.

In taking the measurement on the living subject, therefore, we should in these cases take as the points of measurement the *trochanter major* and the external or internal malleolus.

By reference to the first illustration it will be seen that the distance from the external condyle, A, to the point B, the *trochanter major*, is $14\frac{6}{8}$ inches. The distance from the same point, A, to the anterior spinous process C, is $17\frac{4}{8}$ inches.

By referring to the second illustration it will be seen that the true measurement has but *one angle*, while that from the anterior superior spionus process has *two*.

The distance from the external condyle, A, to the *trochanter major*, B, is $13\frac{4}{8}$ inches. The distance from the same point, A, to the anterior superior spinous process, C, is $15\frac{4}{8}$ inches.

It will be seen, therefore, that by the true measurement we have a shortening of only $1\frac{1}{4}$ inches; while that from the anterior superior spinous process gives a shortening of full two inches.

This was followed by a paper by Dr. A. M. Barker, of Buffalo, on the "Asymmetry of lower limbs and its relation to shortening after fracture of the femur."

The term asymmetry, rather than normal inequality, was used, for the reason that it was difficult to determine whether the condition as found in a majority of individuals was a normal or an abnormal one. Comparative anatomy offers nothing in regard to the matter; the possibility of its being a freak of evolution, therefore, was suggested.

The investigation and original observation regarding the inequality in the length of lower limbs is due entirely to American surgeons, no mention of the subject being found in any foreign or home work on surgery. All that has been published regarding the matter has appeared in medical journals of this country.

Among the first to call attention to this matter was Dr. Wm. C. Cox, of Norristown, Pa. He had noticed that the pantaloon leg on one side became worn much sooner than that of the opposite side, and the possibility of a difference in the length of opposite lower limbs in persons who had never received an injury to that part of the body suggested itself to him. Dr. Cox gave the result of his observation in a record of fifty-four cases.

The very extensive observations of Dr. Wight, of Brooklyn, were referred to.

A malpractice suit occurred several years ago in Perry Co., Pa., because of a shortened femur, after treatment, of five-eighths of an inch, in which the fact of the asymmetry of lower limbs was made so plain that the case was nonsuited without delay. Drs. Agnew and Hunt, of Philadelphia, testified that they had measured many limbs and found them unequal without previous fracture. The brother of the plaintiff was measured and was found to have a normal inequality of three-eighths of an inch.

Two cases reported by Dr. Wight, of Brooklyn, were spoken of. Both received a fracture of the femur. One was in the *right* femur about the lower part of the middle third; the other, the *left* femur, about the middle.

An extending weight of *twelve* pounds was used for the second patient, and one of *sixteen* for the first patient. The left limb of the second patient (the injured one) measured one-half inch longer than the right, while the *right limb* of the first patient measured one inch shorter than the left. Both were oblique fractures, and the obliquity was considered to be greatest in the left fractured limb. It must be admitted that one of these patients had, before the injury, a right lower limb shorter than the left, and the other a left lower limb longer than the right.

A more general knowledge of the facts of asymmetrical development, not alone of the lower extremities but of other corresponding parts of the body, would have a tendency to prevent suits at law for malpractice.

After some general discussion the Association was declared adjourned, to meet in Rochester the second Tuesday in May, 1887.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, May 4, 1886.

Reported by Eugene Smith.

Dr. Coakley, vice-president, in the chair.

Dr. J. W. Grosvenor read a paper on Veratrum Viride which will be found on another page.

Under discussion, Dr. Hopkins spoke flatteringly of Veratrum, stating that he used it daily. Formerly he used it with good effect in membranous croup, and was sorry it is so little used in such cases at present. In angina pectoris in the young, unaccompanied by heart lesions, it is of value. Dr. Dorland said we now use veratrum where thirty years ago bleeding would have been the remedy. Dr. Hubbell emphasized its use as an abortive to inflammation.

Dr. Heath said the alkaloids of veratrum were irritants, and in his opinion the drug had no advantage over other less dangerous cardiac depressants.

Under Voluntary Communications, Dr. Hayd presented a case of fracture and dislocation at the elbow, of nine years standing, and asked the members to make a diagnosis. Upon request he gave his diagnosis as fracture between the condyles of the humerus and a subsequent dislocation of the radius upward on the humerus.

Under Prevailing Diseases, prostatis was mentioned.

The society is announced to meet hereafter in parlor A, first floor, of the "Genesee."

THE UTICA MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

Reported by J. G. Kilbourn, M. D., Secretary.

The May meeting of this association was held at the residence of Dr. C. E. Smith, on Hopper street, on the third instant. There were twenty members present. Dr. J. B. Andrews, of Buffalo, formerly a member, was present and was warmly greeted by his former colleagues. The presence of Dr. Stephen A. Smith, of New York, also added much interest to the meeting.

For a number of years this association has had monthly meetings excepting during the very warm weather of summer, and has done much toward the advancement of the art of medicine and surgery in this city and toward the promotion of good fellowship among physicians. The meetings are held on the first Monday evening of each month, usually at the residence of some member, and a supper is provided. A standing committee provides for a paper to be read at each meeting, and each member present is asked in turn to discuss it. At the last meeting no paper was presented. The President, Dr. James G. Hunt, in the regular order of business, called for the report of the Special Committee on the Publication of the Proceedings of the Association. Dr. Ford, for such committee, said that many of the papers presented were of such value that they ought not to be lost, and the committee recommended the publication of the proceedings in The Medical Press of Western New

York, under the supervision of the Committee on Publication, and that from time to time such papers be offered this journal, as the members might furnish the committee for this purpose.

A case of vesical calculus was reported by Dr. W. E. Ford. The patient, a lady of about twenty-four, came from Indiana in January last to her home in this county, suffering from cystitis, bringing a letter from physicians who had examined her, stating a stone had been detected in the bladder. Dr. Ford examined her and verified the diagnosis; but at about this time such severe pain began in the region of the liver, and the general condition of the patient was so alarming that the operation was delayed until February 9. In the meantime the temperature remained from 102° F. to 103°, the pulse from 120 to 130, emaciation proceeded rapidly, nausea came on, and the pain and frequency of micturition increased to such an extent that she at no time could rest longer than half an hour. Of the whole quantity voided from the bladder (about three pints daily) one-half was pus and mucus; no casts were found; the urine was highly alkaline and exceedingly offensive. The history of the illness which was rather meager, pointed to cystitis, beginning a year and a half before, with no special deterioration in general health until within three months. During the latter period she had suffered greatly, had on two or three occasions passed considerable blood from the bladder, many small clots of fibrin passing, and her temperature had become high; irregular chills appeared, and she had lost rapidly in flesh. The liver was found to measure five inches in the line of the nipple, and to be smooth but tender, and the other organs healthy. On the 9th of February, in the presence of Drs. Wilson and Gorton, of Waterville, and Dr. Kilbourn, of Utica, the bladder was opened by the usual incision through the vaginal wall. The walls were found thickened and rough, the organ itself small and all parts of it easily reached by the finger, but no stone was found. The ureters were so dilated that the finger passed readily into them, and it was easy to explore them with sound or forceps. It was thought the calculus must be in the left ureter, and that it was not safe to search longer. The wound was kept open and the bladder washed twice daily with a bichloride of mercury solution, and after a week with boracic acid

solutions. The general condition of the patient improved for ten days, the relief from pain was complete, and the temperature curve was encouraging. After this time, however, the temperature rose again to 102° and from that to 103¾°, and the patient steadily lost ground. During the month a great quantity of phosphatic sand was discharged and once a single calculus weighing perhaps sixty or eighty grains, while the daily discharge of grains the size of rice kernels must have brought the total weight of this detritus up to ounces.

The patient died the last of April, and Dr. W. M. Gibson made the autopsy. The liver was enlarged and to its under surface and to the diaphragm was found firmly adhered the dilated and thickened capsule of the right kidney, six inches in its larger and perhaps four inches in its shorter diameter and adherent to the kidney, which was sacculated and filled with most offensive pus. The ureter was greatly thickened and enlarged, being nearly an inch in diameter its entire length, and having near its entrance into the bladder an appreciable pocket where the stone had originally lodged. The left kidney was enlarged and had the characteristic appearance of septic poisoning, and its ureter was also dilated, though to a less degree. The bladder was small and studded by large granulations and covered with sandy detritus.

The medical management of the case was detailed, the temperature chart exhibited, and three other cases of the successful removal of vesical calculus related. The points of interest dwelt upon were the location of the calculus, which was originally felt with a nearly straight uterine sound, the difficulty of determining during life the exact size of the kidney involved, and the disintegration of the phosphatic mass.

Dr. Gibson said that the true kidney tisue had disappeared and was replaced by granulations and abscesses, that the occasional discharge of offensive pus referred to was caused by the giving way of the walls of one of the smaller sacs.

Nearly all the members took part in the discussion, and Dr. Hutchinson exhibited a large collection of vesical calculi, mainly from a collection made by the late Dr. Grafton, of Watertown, and also some instruments devised by the latter many years ago for the purpose of sounding the bladder.

After the collation the association adjourned for one month, to meet with Dr. A. R. Simmons.

Book Reviews.

A Dictionary of Practical Surgery. By various British Hospital Surgeons. Edited by Christopher Heath, F. R. C. S. Two volumes in one, pp. 1854. Price $7.50. Philadelpia: J. B. Lippincott & Co. 1886.

The practitioners of the previous generation will remember the immense aid which the "Surgical Dictionary" of Samuel Cooper rendered them, and its wide-spread popularity. Something quite similar, but brought up to date, has been most successfully attempted by Mr. Heath, whose announced aim was to produce "a compendium of the practice of British surgery of the present day, and as only two years will have elapsed since the first planning of the Dictionary and its publication, that object will have been fairly attained." The names of the various writers for the work are, of themselves, a guaranty that it represents the best of British thought, experience, practice and teaching.

In such a work perfect unanimity of opinion on mooted points is not to be expected; yet we find surprisingly little diversity considering the great variety of topics treated of. Apparently everything which concerns the surgeon finds appropriate place. In fact the new work comes to us with all the authority of a new edition of Cooper, representing not the work of one man, but the combined wisdom of a metropolis of surgeons. To make reference even more easy there is at the end a complete index, by which means everything that the book contains on a given topic can be placed under service at a glance.

For the work we have only a hearty welcome, and recommend it as a most valuable addition to any library.

How to Care for the Insane. By Wm. D. Granger, M. D.; First Assistant Physician to the Buffalo State Asylum for the Insane. Pp. 97. New York: G. P. Putnam's Sons.

To Dr. Granger is due the great credit of having been the first to begin a systematic course of instruction to asylum attendants on the care of the insane. His earnest efforts having been approved and encouraged by the authorities of the Buffalo asylum, there has resulted at that institution a school for instruction and practice in

such care, and it was largely to further the usefulness of its scholars that this manual has been prepared.

For this little book we have nothing but praise. It is obvious that the ordinary hand-books on emergencies, "How to Treat the Sick," etc., are silent on most of the very topics here discussed; hence the necessity for some work of this kind. There are chapters which tell the attendant that which he should first know concerning the nervous system, the mind and its faculties, and the predominant varieties of insanity. Then are taken up in due turn the duties of an attendant, general care of the insane, care of the violent and homicidal insane, care of the demented, the paretic, the epileptic, the most common accidents and emergencies among the insane, and how to treat them, followed by general directions concerning effects of medicine, forcible feeding with the stomach tube, and the like, every item being of vital importance.

The author's illustrations are happy, his diction clear, and his work, which any one of intelligence can easily understand and master, in all respects thoroughly creditable.

Diseases of the Digestive Organs in Infancy and Childhood. By Louis Starr, M. D. Pp. 384. Philadelphia: P. Blakiston, Son & Co. 1886.

A new work which comes to us with a freshness and completeness that charm. The discussion of various diseases is preceded by a chapter of forty pages on the Investigation of Disease which is most valuable, and from which the most experienced can derive only profit. The young doctor placed face to face with a very sick infant, must turn perhaps to ignorant parents for the little information with which to begin his study of the case. Guided by such hints as this chapter may afford him he may scan the features of his little patient and make such rapid yet accurate physical examination as shall indicate almost unerringly the seat and nature of the disease, without asking any but the most commonplace questions.

Besides affections of the alimentary tract alone the author takes up tabes mesenterica, and affections of the liver and peritoneum; and then appends some extremely timely hints on feeding, bathing clothing, sleep and exercise.

The directions are throughout unmistakably plain, the author placing much more stress on proper regulation of the diet than on

administration of drugs; moreover, the dietetic recommendations are not slurred over but are explicit and to the point.

The work appears in style commensurate with its worth, and should find a place in every library.

THE PRINCIPLES AND PRACTICE OF SURGERY. By Frank Hastings Hamilton, M. D., LL.D. Third edition; revised and corrected. Pp. 989. New York: Wm. Wood & Co.; Buffalo, J. H. Mattison.

Every practitioner of Western New York will welcome this third and much enlarged edition of Prof. Hamilton's treatise on general surgery. It comes with a freshness, not only of make-up but of diction, which appeals both to the eye and to the mind. One of its features proves attractive at first glance, and that is the adoption of the classical nomenclature of diseases accepted by the Royal College of Physicians. This is well calculated to give a certain unity in medical terminology which we in this country at present sadly lack.

A key-note to more or less of the volume is struck in one sentence of the author's preface, which we reproduce. "It is within the period of his (the author's) later life that antiseptics have been popularized, with the effect, it is claimed, of having still further enlarged the bounds of legitimate surgery, and of giving extraordinary promise for the 'surgery of the future.' To one whose experience has been gained while these changes were in progress—a period so brief in point of time, but so widely separated in their practices, pretences and hopes,—it will be granted to institute comparisons and draw conclusions." Those who are familiar with Dr. Hamilton's various contributions to the journals are able to understand what these conclusions are,—which we more regret than we have space to express.

We would have liked to see, also, more positiveness in teaching some of the fairly settled questions of modern surgical pathology, since we deem that the inexperienced, for whom this volume was largely intended, need some positive teaching rather than vagueness or silence. Thus we fail to find the briefest allusion to the now well known rôle which micro-organisms play in the etiology of erycipelas; while the term septicæmia does not appear in the index, and the consideration of pyæmia is most brief and unsatisfactory. In the treatment of gunshot wounds, we think altogether too much

space is given to the use of the probe and not enough to the dicta of the modern "let alone" policy.

But these faults are outweighed, in our estimation, by the admirable practical character of the book when the sections devoted to treatment are reached. Here the directions are for the most part succinct and unmistakable, such as to leave little room for doubt as to which of the debated courses it may be best to pursue. And especially in that part devoted to fractures and dislocations one finds an epitome of the author's large work and larger experience, which strikes us as the most valuable portion of the volume. Here Prof. Hamilton speaks with a backing of authority, which none may dispute. We note that he does not favor wiring the fractured patella, which is not strange in an unbeliever in antiseptics; also that he lays considerable stress on diagnosis as between intra- and extra-capsular fracture of the femoral neck,—a matter to which many good surgeons attach very little importance.

For the work as a whole we have, naturally, nothing but praise, while we commend the excellent dress given it by the publishers. Were this a new work by its distinguished author we should feel disposed to give it lengthy consideration; as it is, the volume is already too well known to call for much more than congratulation on its reappearance.

THE STUDENTS' MANUAL OF VENEREAL DISEASES. By Berkely Hill, M. D., and Arthur Cooper, M. D. Fourth edition. Pp. 132. Philadelphia: P. Blakiston, Son & Co. 1886.

The joint authors of this little manual, well known as careful students and discriminating writers, have presented this as an abridgement or epitome of their larger work on syphilis and local contagious disorders. While they are pronounced *dualists* in their teachings, the American student, not forewarned, might not understand their use of terms; they recognize syphilis as distinct from chancre,—their acceptance of the term chancre making it equivalent to what we, in this country, almost universally call chancroid or soft chancre.

With this exception theirs is a most excellent manual for students.

QUIZ COMPENDS: PHARMACY. By F. C. Stewart, M. D., Ph. G. Pp. 196. Philadelphia: P. Blakiston, Son & Co. 1886.

As the author well says, it is not the object of a quiz compend to teach new facts, but rather to present facts already well known

to science in comprehensible form. Dr. Stewart is so well known, both as a teacher and pharmacist, that this little manual could scarcely have a better introduction than to bear his name. While intended primarily for the student of pharmacy it would be well could it be in the hands of every medical student; and even practitioners can glean from it some of those practical pharmaceutical directions which they so much need to know.

A feature of the work has been the introduction of mnemonic phrases, which, though not always elegant, may well serve their purpose.

BOOKS RECEIVED.

From G. P. Putnam's Sons, New York:

How to Care for the Insane: GRANGER.

Disorders of Menstruation: UPSHUR.

From J. H. Matteson, Buffalo, the following publications of Wm. Wood & Co.:

The Principles and Practice of Surgery: HAMILTON.

Insanity and its Treatment: BLANDFORD.

Diseases of the Spinal Cord: BRAMWELL.

Hand-book of Practical Medicine, Vol. I.: EICHORST.

Works of Hippocrates, Vol. I. Translated by ADAMS.

Index to Wood's Library, 1879–84.

Also, published by J. B. Lippincott & Co.:

HEATH'S Dictionary of Practical Surgery,

Through Peter Paul & Bro., from Blakiston, Son & Co., Philadelphia:

Diseases of the Digestive Organs in Infancy and Childhood: STARR.

Quizz Compend of Pharmacy: STEWART.

Venereal Diseases: HILL AND COOPER.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge*. Such notices should be received by the fifteenth of each month.

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For Sale.—A Beck's Popular Binocular Microscope, with or without lenses, as desired. Address "Microscope," care of THE MEDICAL PRESS.

To Exchange.—Vols. 2 and 5 of *Science*. Address the Editor.

For Sale.—The Medical Library of the late Dr. Macpherson. It contains many valuable English, American and German works. Can be seen at the Medical College Library.

Wanted.—An experienced physician to take a partnership or work for a percentage in a Sanitarium. Address Dr. S. B. JONES, Cattaraugus, N. Y.

HYDRONAPHTHOL, A NEW ANTISEPTIC.

Dr. Geo. R. Fowler, in the *New York Medical Journal*, gives a very interesting report upon the new antiseptic, hydronaphthol. Its antiseptic properties have been but recently discovered, and the claim is made that it is from ten to fifteen times more efficient than carbolic acid, and will probably supersede it in surgical practice. Hydronaphthol is non-irritant, non-poisonous, non-corrosive, and although only soluble in water to the extent of one part in one thousand, in this proportion is antiseptic. It has no odor to disguise that of putrefaction, nor is it decomposed or rendered inert by the products of putrefactive decomposition—such as sulphuretted hydrogen, ammonia, etc. It is far more stable than carbolic acid, not being volatile at ordinary temperature. Its vapor when volatilized for purposes of fumigation has no obnoxious effect upon the organs of respiration. It will not injure, either in substance, solution or vapor, colors or textile fabrics. Its sparing solubility in water is rather an advantage than otherwise, as mistakes in making solutions cannot occur. A saturated solution is about the strength of one to one thousand, and in this proportion it will perfectly preserve for an indefinite time animal tissues and fluids, and yet upon living tissues this solution produces no perceptible effect other than the formation of a very slight albuminate film—this latter to be considered an advantage than otherwise, inasmuch as it constitutes an additional security against infectious germs floating in the air. If for no other reason than that it is non-corrosive, and hence will not injure the polished surface and keen edge of cutting instruments, it is to be preferred to mercuric chloride, and to the latter it is only second in antiseptic qualities. It is freely soluble in alcohol, chloroform, ether, glycerine, benzole, and the fixed oils. According to careful experiments it is efficient as an antiseptic in the proportion of between one to six thousand and one to eight thousand.

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DISEASES OF THE PERIOD OF DENTITION.

By W. C. Barrett, M. D., D. D. S.

Lecturer on Oral Diseases, Med. Dept. Univ. of Buffalo.

[Read before the Alumni Association, February 23, 1886.]

The digestive apparatus undergoes great changes during existence. Not only is the histological structure of the organs different in the infant from those of the adult, but their functional action undergoes important changes. The character of the secretions is markedly different at different ages. Previous to birth, while the fœtus is deriving its nourishment from the blood of the mother through the placenta, the digestive apparatus is mainly dormant, and the different glands, which as yet have not been called into active exercise, provide no digestive and but little of other fluids. The lungs, too, are not as yet exercising their function, and the mother breathes, as she also provides nutriment, for both. But immediately upon the severance of the umbilical cord, or the stoppage of the placental circulation, the first stupendous change of conscious existence takes place.* The blood, no longer purified through the lungs of the mother, must have its separate and individual process

* It should be remembered that the first attempt at breathing is involuntary, and succeeds the stoppage of the supply of oxygen from other sources. If a pregnant animal be thoroughly anæsthetized, the uterus opened and the fœtus, it matters little at what period of existence, exposed to the air, there is no attempt at breathing so long as the placental circulation is kept up. But shortly after the severing of the umbilicus the tissues begin to feel the need of oxygen, and there are spasmodic attempts at breathing. If the fœtus be not sufficiently advanced for this it dies of suffocation. But if it can breathe, separate existence at once commences, by the establishment of the pulmonary circulation.

for oxygenation, and this change, unlike the previous and subsequent modification of growth, must be instant, and not gradual.

The circulation of the human embryo has already undergone one change *in utero.* Previous to the formation of the placenta, when the umbilical vesicle was the sole source of nutrition, there was a complete round of the circulatory fluid in the embryo tissues, and that circulation, like that of extra-uterine life, was wholly within itself. The vitellus was the organ which provided the fœtus with nourishment, and the vitelline circulation was that which carried pabulum to the formative tissues. But with the formation of the allantois the umbilical arteries came into existence. As the umbilical vesicle diminished, the allantois enlarged and was changed into a vascular chorion, and a part of this became the placenta which, during the greater part of intra-uterine life, supplied the growing fœtus and carried on its circulation.

These changes were gradual, but with the period of birth commences another circulation. The blood is now almost instantaneously directed to the lungs, which by the first feeble cries of the newly-born child are inflated with air, and so commences adult circulation. The ductus arteriosus, which, during fœtal life, had conveyed the blood directly from the right ventricle to the aorta, without its entering the pulmonary artery and the consequent pulmonary circulation, now closes up, while the pulmonary artery enlarges, and the blood is forced by the right ventricle through it, and thus independent oxygenation commences by the entrance of the lungs upon the active performance of the fuction of respiration.

All through these successive changes alterations are going on in the digestive organs. During fœtal life the alimentary canal has become partially filled with an accumulation which has received the name of meconium. The gastric juice is not yet secreted, although the liver provides a very scanty secretion. But at birth the digestive organs are called into active exercise, and provide secretions that are capable of acting only upon the very simple food which must at first be the sole regimen of the newly-born child. The saliva is not as yet provided with the ptyaline which, later in life, gives it its distinctive character, nor are the gastric or intestinal juices yet of a nature that permits them to act upon any kind of solid food. Na-

ture has provided the proper pabulum in the milk of the mother, which at first contains the colostrum that shall lead to the expulsion of the meconium which the intestines contain. With the development of the child the milk of the mother undergoes changes which gradually lead up to a stronger diet.

The transitions in the development of the digestive tract extend to full adult life. They are gradual, but they may be divided into successive and well marked stages. The development of the teeth keeps pace with them, and may, in all normal conditions, serve as an unfailing index of the state of advancement of the internal organs. At first there are no teeth, for the condition of the digestive tract is such that it cannot prepare for assimilation any form of solid food. The pabulum must be of the simple, mild character of the milk of the mother, which contains in solution all the nutrient forces needed by the immature organism, and in the exact proportion that nature demands. The substitution of this natural food by any form of artificial food is always more or less disastrous in its results. Nor can an infant of but a few days of age be safely given the milk of a woman whose confinement took place some time previous to the birth of the child. The milk of such a woman is too highly organized for its immature function. When young calves or lambs are deprived of the milk of the mother and fed on that of others who have been in lactation for some time, they do not thrive well. This is even more marked in the human race, because the period of lactation should be longer, and the changes are more gradual.

With the growth of the infant there is a progressive development of the teeth, the incisors appearing first. Too many mothers consider this the period at which the giving of solid food may commence. A greater mistake could not be made. For obvious reasons the teeth are successive in making their appearance, and the fact that the small deciduous molars, which alone are effective in mastication, do not appear until some months after the cutting of the incisors, should teach every mother that it is not until all the deciduous teeth are in position that the diet of the child may with any degree of safety be changed. Up to this time its exclusive food should be the milk of the mother. But with the appearance of the molar teeth the alteration in the digestive function becomes more marked.

It is about at this period that the character of the saliva undergoes a change. The great parotid gland now begins to pour through the duct of Steno, which is directly opposite the molar teeth, a fluid that has distinct parotid qualities. Did time allow, I should be glad to enlarge upon the peculiar properties of this parotid fluid, as distinguished from that of the other salivary glands. It must suffice to say that it is peculiarly fitted to so change the character of some foods as to be essential in their proper preparation for the digestive fluids, and that it is poured out in great quantities during the process of mastication in the precise place where, if the molar teeth be present, it may be thoroughly mixed with the bolus, previous to deglutition.

The full development of the deciduous molar teeth, then, marks an important era in the growth of the digestive organs, and is an indication that they are sufficiently advanced to receive a diet of greater consistency. Succulent vegetables may now be digested, but the character and size of the teeth show that they are intended only for very light use, and that they, as well as the stomach and intestines, are not as yet fitted for more highly organized animal foods.

With the continued growth of the general system of the child, the digestive tract progresses in efficiency, and the time approaches when it is prepared to assimilate pabulum of a yet more advanced character, aud nature with careful hand is preparing the organs for the proper preparation of this food. Another and a larger molar makes its appearance—the largest tooth with which it is to be provided—and now for the first time the dental organs, and coincident with this the digestive organs, are sufficiently advanced to receive animal food of a simple character, and the more dense of the vegetable pabulums. As growth continues, the diminutive and feeble deciduous teeth are replaced by larger and stronger ones, until, when the age of about twelve years has been reached, the dental structure is complete, and the alimentary canal has reached a period of development that fits it for the digestion and proper preparation for assimilation of any food that is fit for alimentation.

The development of the whole body, if we except certain special organs, has thus advanced by regular gradation. Not entirely by

imperceptible growth, for, as in inanimate nature, there are periods of pushing energy, and others of comparative rest. It is by alternation of rest and effort that all organic changes occur. But the general advance of the system is along the same line, and in studying the development of any one organ, or set of organs, it is necessary to consider their relation to the growth of other organs. "To regard the eruption of the teeth as the sole factor in the general process known as the first dentition, is to perpetrate a kind of medical synecdoche. Children get their first teeth because they are at the same time getting a second stomach and second intestines."*

It may thus be seen that the condition and growth of the internal organs of digestion may be accurately gauged, and their capabilities for work exactly determined by the state of dental development. If, previous to the appearance of the teeth fitted for its perfect mastication, any special food be given the child, it cannot be digested, but must act as an irritant, provoking all kinds of gastric and febrile disturbances, thus not only delaying the progress of development of the alimentary organs, but actually causing their deterioration and the destruction of their functional powers.

To my apprehension, it is from the lack of the knowledge of this developmental progression, or from willful disregard of the lessons which it so plainly teaches, that the most of the so-called diseases incident to teething arise. As I have said, the growth and eruption of the teeth is a physiological progress. If they be accompanied by any pathological conditions, these are due to extraneous and ordinarily preventable causes. It is to errors of diet that they should usually be ascribed, and not to the mere advancement of normal organs. An excellent authority says: "While not denying that certain minor evils may attend the evolution of the teeth, it is doubtful if many of the more serious ailments often accompanying this process have any dual connection with it."†

Another writer upon the same subject says: "Dentition is usually held to be the cause of many ailments, but to what extent it is really so is doubtful. The time of dentition is one of transition. A uniform and bland diet is changing for one of greater variety,

* Pediatric Aphorisms. Prof. Letamendi. *Independent Practitioner*, October, 1884, p. 491.
† *Archives of Pediatrics*, June, 1885, page 380.

and the febrile attacks, diarrhœa and vomiting, which are so rife at this time, are more satisfactorily explained by indigestibility of food than by some occult influence of tooth-cutting."*

Dr. Edward Henoch, of Berlin, says: "In the opinion of a majority of physicians, teething is a physiological process, that cannot give rise to any morbid phenomena."†

Another competent authority says: "No doubt during the cutting of the teeth, the bowels generally are in a state of irritability, for we know that at these periods the follicular apparatus of the intestines is undergoing considerable development."‡

The so-called diseases incident to teething are mainly gastric disturbances. The period of greatest fatality corresponds very nearly with the time of the eruption of the teeth, because it is about this time that most mothers commence a change of diet for the child. With the appearance of the incisors solid food is given. The infant, with the instincts of nature, rejects it, but the mother persists until a taste for unfit food is acquired, very much as an appetite for tobacco is perhaps obtained in later years. At first, the amount ingested is insufficient to produce serious consequences, and as larger amounts are taken a diarrhœa of no alarming kind manifests itself. The appetite for unfit solid food increases with its gratification, and soon febrile symptoms supervene. The child becomes exceedingly restless. The milk which it takes is regurgitated—perhaps there is vomiting of some curdled milk—the diarrhœa increases, and the discharges have an excoriating effect, until finally digestion stops and the child dies of inanition, or perhaps convulsions ensue, one of which proves fatal. And yet it will be said that the child died from teething, when dentition was progressing naturally, the gums were not swollen or tender to the touch, and there was no indication of any reflex nervous irritation.

Do not understand me as insisting that delayed dentition may not induce a train of symptoms somewhat analogous to these, but when fever and a slight diarrhœa are due to this cause, the diagnosis should not be difficult. In this case the disturbance will not be

* Goodhart. Diseases of Children. Page 28.

† Edwards. Therapeutics of Diseases of Children. Page 105.

‡ Eustace Smith. Wasting Diseases of Infants and Children. Page 67.

functional, but of a nervous character, and the gums will give timely indication and warning of the impending trouble. In by far the greater proportion of the diarrhœas, and the gastric forms of the diseases of young children, I am confident that a careful examination of all the attending circumstances will find that they are due solely to errors of diet. In my own clinics at the Medical Department of the University of Buffalo, I have scarcely met a case in which it was necessary to give the advancing teeth any alleviation whatever. Children have been presented for lancing of the gums, by mothers who were confident that all the little one's ailments were due to the cutting of its teeth. The family physician had perhaps told them so, but an examination of the mouth almost invariably found the gums in a healthy condition, and the teeth progressing normally. No child was ever yet presented at my clinic whose food was exclusively the milk of a healthy mother. But I have frequently seen them when their stomachs were distended by the products of the indigestion of food that was lying, an absolute foreign substance, within them. Consider, gentlemen, what is your own condition when suffering from the eating of improper food, and then think what must be the state of a little helpless infant, with all its susceptibility to malign influences. Its stomach is loaded with that which cannot be digested. The presence of the mass is intolerable to the organism, and it must be eliminated in some way. Nature hangs out the signal of distress in the form of a rise of temperature, and a general febrile condition, if it be not vomited up. The mass acts as an irritant, producing a violent motion of the coats of the stomach, and it is perhaps passed through the pylorus into the intestines, where it produces increased peristaltic action, and so is hurried through, leaving the whole digestive tract in such an inflamed and angry condition that a diarrhœa of some days' existence is the natural sequence. This is repeated time and again, until a chronic condition of irritation ensues and the child dies of the exhaustion consequent upon it. Or, perhaps, the undigested food remains in the stomach, the powers of the child having been so exhausted by previous struggles that the mass cannot be eliminated. In this case convulsions will probably end the scene, and if one or two teeth be, as they usually are at this period of life, just making

their appearance, through healthy gums, they will be charged with the untimely death.

A thoughtful writer in one of our journals says: "I do not ignore the potent agency of the various meteorological changes in the causation of these fatal diseases in the infant, but I am convinced that many more children would be saved during such changes if more attention were paid to alimenation as a prophylactic measure. Experience has taught me that in those families where I was allowed to regulate the food of the infant, and where there was no departure from the rule laid down, the children passed through a very hot summer without being subjected to the ailments which are so disastrous to early life. If, however, parents are permitted to use their own judgment, or permit themselves to be influenced by the whims of some motherly neighbor, who scoffs at the present scientific dietary and boasts that she has reared a family of twelve children, and fed them 'from the table' when they were babies, then the physician might as well pursue the 'let alone plan' with almost a guarantee that his services will soon be required to pacify nature offended by a supper of bacon and cabbage."*

I have said that delayed dentition may produce symptoms that closely simulate those consequent upon improper feeding. How shall we distinguish between the two?

A correct diagnosis can only be made with certainty after a very careful examination, not only of the child itself and the attending symptoms, but of its past history, its sanitary environments, and its diet. The age should be accurately determined, that it may be seen whether the dental development corresponds with that of the general system. This is important, because it is not infrequent that morbid conditions are ascribed to teething when the teeth due at the time are all in place. A medical journal reports a case of infantile palsy in a child more than three years of age, as due to teething. Both legs were cold and powerless. There was sufficient irritation of the gastrocnemius muscles to cause a permanent contraction, thus producing a kind of talipes equinus.† Nothing is said about

* S. S. Adams, M. D. "How Shall We Feed the Baby?" *Archives of Pediatrics*, May, 1885, page 270.

† *Medical Bulletin*, June 1885, page 196.

the state of forwardness of the dentition, but unless it was unusually delayed, the physician in this case, as is too often done, jumped at his conclusions, and ascribed to teething a trouble that had a deeper origin.

The condition of the gums should be carefully noted. If they are normal, without any special inflammation or thickening, and if on the other hand they be not unduly tense and glistening, we should look elsewhere for the source of the irritation. It should be remembered that the gum is naturally very hard and dense, from the large amount of fibrous tissue in it. Normal growth, when the tooth is near the point of emergence, will find the gum whitish, glistening, and tense in appearance. There may be such a condition of impermeability, of toughness and hardness in the gum, that the advancing tooth is retarded thereby, and hence undue pressure is brought to bear upon the, as yet, insufficiently protected pulp, thus inducing reflex nervous disturbances, but I believe this condition to be comparatively rare. Unless there be constitutional and general disturbances that seriously interfere and require immediate attention, the tooth easily makes its way through the gums, by their absorption under the slight but continual pressure of the growing tooth. Should the contrary be the case, the remedy is a simple one; a crucial incision with the lancet over the point of the tooth, which will be easily detected, will give it egress, and the operation will be a painless one.

The general symptoms attendant upon this unusual condition will be of a nervous character. The child will have periods of irritability, and they will be paroxysmal in character. It will suddenly awake from a sound sleep with a frightened cry. There will be spasmodic twitchings of the muscles, more especially of the face. It may give indications of earache. Its eyes will probably be watery, or possibly gummy. It will desire to bite upon hard substances, which will give it pain and cause it to cry out. Later on, however, this will change, and it will fear the contact even of the finger with the gums. There may be an increased or a diminished flow of saliva, or it may at one time be streaming from the mouth, and at another all the oral tissues may be parched and dry. All these symptoms will be, as before stated, paroxysmal in their nature, and it is this

peculiarity which especially marks the condition. The bowels may be very irregular, or they may not be particularly affected. Sudden watery discharges may be succeeded by constipation. Their condition offers no very clear indication of the real cause of the trouble, for they may be in a comparatively normal state, unless there be gastric disturbances due to other causes.

A simple lancing of the gums over the advancing tooth, with the administration of a mild anodyne, will be all that is necessary. A four per cent. solution of the muriate of cocaine may be rubbed upon the gums, and this will afford a present relief, and by its action upon the terminal filaments of the nerves will frequently stop the muscular twitching, if this be present. Or the following lotion may be prepared and the gums bathed with it.

℞

Hydrochlorate of Cocaine, ...	grs. iss.
Tinct. Saffron, ...	gt. x.
Syrup Simp., ...	℥ iiss.

I would advise a sparing use of the lancet if it be necessary to resort to it at all. The incisions need not be extensive, and they cannot be very deep, nor should they include the gum over teeth that are not manifestly retarded by actual pressure.

There is another and yet rarer condition of the oral tissues of teething children, that is of a more formidable character. It is when the teeth are slow in their development, when they are retarded and roughened through constitutional or general derangements, and thus become a long continued source of irritation. The gums are then turgid, inflamed, thickened, abnormally vascular and tender to the touch. It will be remembered that in a healthy state they are the direct opposite of this; that they have but a limited blood supply, few nerves, have comparatively little sensation, and are hard, smooth, light in color and glistening in appearance. The abnormal condition to which I refer is easily recognizable at a glance. The salivary secretion is largely increased. The inflammation and redness extends into the pharynx, and finally down the alimentary canal to the stomach, producing gastritis, and an irritating, exhaustive diarrhœa. If the sanitary conditions be bad and the food of an improper character or insufficient in nutritive power, the disease

assumes the type of a malignant stomatitis, or even of cancrum oris. The tissue of the gums becomes ulcerative, and sloughing ensues. The child becomes excessively debilitated through its inability to take nourishment, and from the diarrhœa which accompanies the condition there is a general malaise. The mouth is hot, the tongue coated, the breath offensive, the urine is high in color and scanty, and all the tissues of the body sympathize in the disturbance.

That these symptoms may possibly be induced by delayed and vicious dentition, assisted and aggravated by bad sanitary conditions, I believe to be indisputable. I have seen some of these in a boy of fourteen years of age, brought about by retarded eruption of the cuspids, for it is not alone the cutting of the deciduous teeth that may induce serious disorders. Henoch says that he "considers dentition, both first and second, to have much to do with their occurrence."*

The first remedial measures in these diseases should be directed toward the general system. Bad sanitary conditions should be remedied and the strictest hygienic treatment instituted. The diet should be carefully regulated, and a moderate cathartic, followed by pepsin and dilute muriatic acid be given, if there be great digestive disturbances. If the symptoms are mainly oral, chlorate of potassium and muriatic acid should be given. The following local mouth wash may be used every hour:

Potass. Chlorat, ...	gr. x.
Aquæ Dest., ...	f℥ i.

I have frequently, in analogous conditions, seen the happiest results from the use of Listerine one part, water ten to twenty parts. If there be ulceration, the surfaces of the ulcers should be swabbed with a saturated solution of permanganate of potassium.

When the condition of the mouth and the general system will warrant it, surgical interference may be demanded. A careful examination, with due consideration of the age and state of development of the other teeth, will enable the judicious surgeon to determine what tooth or teeth may be delayed and acting as the irritant.

* Goodhart. Diseases of Children. Page 88.

Under the influence of an anæsthetic, if necessary, or five minutes after painting the gum over with the fluid extract of Canabis Indica, deep incisions should be made over the point of the delayed tooth, and the gum dissected back a little until its exact condition can be determined. If it be bound down by adhesions, these should be cut. If the tooth be presenting abnormally, or if it be so impacted that its development will only aggravate the existing difficulty, it may be necessary to extract it, but these are conditions that it is not my present purpose to discuss. Impacted teeth usually bring about a train of symptoms quite distinct from those enumerated, and they require radical surgical interference. I am not speaking of anatomical anomalies, but of those pathological conditions which may accompany the eruption of normal teeth. It will usually be sufficient, in the inflammatory condition considered in this paper, to make deep and free incisions down to the offending tooth or teeth, and to cut or bur away any roughness of the surface that may be causing the irritation. I had occasion not long since to thus smooth the surfaces of two first permanent molars, whose enamel upon the crown was almost like a coarse wood rasp.

I have spoken of retarded dentition. This may occur because of a general lack of development, the teeth simply keeping pace with the growth of the rest of the body. There are but few constitutional diatheses which interfere with dentition. In inherited syphilis and in tuberculosis, the teeth are usually cut early. In chronic diarrhœa and in the weakness caused by improper food, the development of the teeth goes on uninterruptedly. There is but one disease in which general nutrition is affected, that seriously interferes with tooth growth, and that is Rachitis. Whenever the child is attacked by this, then development of the teeth is arrested. Eustace Smith says that this influence is peculiar to rickets. "If the disease makes its appearance before any of the teeth are cut, their evolutions may be almost indefinitely postponed. If some teeth have already appeared, the further progress of dentition is interrupted."*

It may not be unprofitable to glance at the symptoms attendant upon an improper diet, and which are in my opinion the usual cause of the so-called diseases incident to teething.

* Wasting Diseases of Infants and Children. Page 97.

Diarrhœa is the most common of infantile diseases, and it is usually one of the first symptoms of a deranged nutrition. There are cases undoubtedly induced by the nervous reflex of dentition, and the unusual heat and moisture of some of the summer months may have an influence for evil,* but by far the greater number of cases of diarrhœa in children may be directly traced to errors in diet. At the age of eight or nine months, when the incisor teeth are making their appearance, most mothers and nurses commence the giving of more solid foods. The period is one of unusual peril, for it is one of transition. There are eras during which unusual progress is made, and the time of dentition is one of them. The young child is then peculiarly subject to disorders of many kinds; not as a consequence of the eruption of the teeth, but as a part of a general activity of growth and development, to which dentition and morbid phenomena both in a sense respond.†

At this critical period new articles of food, which the undeveloped nutrient organs are powerless to digest, are introduced into the stomach, and a portion passed into the intestines. Within a few hours the symptoms of indigestion are manifested. Perhaps there may be nothing more formidable than flatulency and colic of a mild character. Or there may be vomiting and purging for some days, with but little of febrile disturbances. If the bowels be not relieved the child becomes pallid, and is fretful and restless. A slight rise of temperature may be observed, and it is thirsty and will drink large quantities of water. The mouth is dry, the tongue red and furred, and its papillæ prominent. The evacuations become more frequent; they are liquid and perhaps green and offensive. Then the temperature suddenly jumps to 101° or 103°, and the evacuations become colorless, profuse and watery, with a sickening odor, or perhaps they assume a pinkish color. These symptoms may be succeeded by a sudden collapse, the temperature falling rapidly, and death ensue at but a few hours notice. All these are the possible attendant symptoms upon a simple diarrhœa, the result of injudicious feeding, or they may follow as a train succeeding it. It

* The Summer Ailments of Teething Children. Judson Bradley, M. D. Detroit *Lancet*, October, 1885. Page 153.

† Goodhart. Diseases of Children. Page 29.

will be seen that they vary, in important particulars, from those given as the results of reflex nervous irritation arising from the presence of an unrelieved, advancing tooth, and from those attending the inflammatory state of the gums due to roughened, unerupted teeth. It is important that the varying conditions be kept clear in the mind, that remedial measures may be properly directed.

Experience and careful examination will enable one to distinguish the comparatively few instances of general disturbances caused by dental irritation. You have already learned that, in my own opinion, these cases are rare. "The child is teething," is the vague explanation given to many an anxious mother, by practitioners who are either incompetent to form a complete diagnosis, or too indolent and careless to seek for the hidden springs of disease; who are too heedless to carefully weigh all the symptoms, masked as well as developed, and who trust to luck for a verification of their hastily formed prognosis. I believe that this convenient make-shift has quieted the alarmed mothers and lulled the anxious friends of countless little innocents into a fancied security, and stayed the fears which might otherwise have instituted timely measures for relief, until, too late to save the little one, it was discovered that an alarming disease had attacked the vital organs, the very citadel of life. "Only teething." To how many promising young existences in which were centered the hopes, the ambitions, the heart affections of a family circle, have these words sounded the knell. "Only teething,"—and the fond parents looked with but little alarm upon symptoms of the gravest character. "Only teething"—but when to their agonized ears came the sound of the clods of earth falling upon the little coffin, and they realized that with the words, "earth to earth, dust to dust, ashes to ashes", the door which opened to a bright and promising future of years of comfort and happiness to be spent with the loved child when grown to manhood or womanhood was now forever closed, when all the world seemed but one wide churchyard in which to bury from their sight their loved ones, in this hour of anguish would it allevate their pain to know that a great mistake had been made—that a fatal error had been committed? And if, to the conscientious physician, the knowledge too late should come that, to save himself a moment's labor and thought he had lightly

passed over indications that it was his duty faithfully to study, would not the sight of those grieving parents, the habiliments of mourning, "the knell, the pall, the groan, the tear,"—would not these things rest heavy upon his soul? That we may be spared these vain regrets the consequences of manifest duty unfulfilled, it becomes us to make a careful study of all the phenomena attending dentition that grave pathological conditions may not be mistaken for mere functional derangements.

THERAPEUTIC NOTES.

BY E. V. STODDARD, A. M., M. D.
Prof. of Materia Medica and Hygiene, Med. Dept., Univ. of Buffalo.

THE ALCOHOLIZATION OF WINES.

A recent effort of the wine-growers in France to have the duty reduced upon the spirits employed by them in the manufacture of wines, has led to some interesting and important developments. The several years past it has been difficult to obtain a good ordinary wine. This has been attributed to various causes, inferior crops, deterioration of the vines, etc. While these may be factors, there are other questions connected with this subject, far more important to those who have an interest and responsibility in the public welfare. Careful investigations have revealed some facts in connection with the methods the "wine-growers" which demand the most serious attention. These are found to be connected chiefly with the process known as "*vinage and the alcoholization of wines.*"

At the late general session of the French Society of Temperance Dr. Lunier made a most interesting communication upon this important subject. He explained that the term "*vinage*" is applied to a process, long followed, of adding, to a wine light in color and weak in alcohol, a dark colored wine strong in alcohol. This mixture is made in certain proportions. The term "*coupage*" is also applied to this process. When wines, resulting from the fermentation of a wort, are used in the mixture, no objection to the process can be made on hygienic grounds. Later, the wine growers found it

more profitable to distil a portion of their crop and employ spirits of 40° to 50°, obtained by a first distillation, to increase the amount of alcohol in their wines, instead of adding a full-bodied wine to a weak one. In this process, if the spirit be added to the wine while it is still in the vat or in the cask before the second fermentation is completed, the mixture becomes sufficiently perfect to be unobjectionable on hygienic grounds. But when the spirit is added after the completion of the second fermentation, the alcohol does not become fully incorporated with the wine until after a considerable period; hence, if the wine be used for immediate consumption, an effect of alcohol is produced which a natural wine never gives. If, instead of a spirit at 50°, the wine is reinforced with alcohol at 90° or 95°, and especially if it be a commercial alcohol, the product is of a far different character, and the danger of its employment is extreme.

Dr. Lunier further showed that on account of *price* the wine-growers have gradually abandoned the practice of *vinage* and employ "*alcoholization*" instead, the latter being far more profitable than the former. One of the principal objections to the alcoholization of wine is that it takes away its vinous and fruity flavor, upon which its merits as a wine chiefly depend. But this is not the principal inconvenience. In such a mixture, the alcohol becomes only partially incorporated with the other elements of the wine. These high-wine products are, immediately after their manufacture, offered for sale and consumption. Their action upon the economy differs greatly from that of a natural wine. Bouchardat states that wines, thus heavily charged with alcohol, do not contain a due proportion of acid and alcohol and that, in their effect physiologically, the action of free alcohol is produced.

Artificial wines, or those strengthened by the addition of alcohol, quickly acquire, on exposure to the air, a taste of vinegar which alone is sufficient to betray their character. Experts in wine tasting claim that, in addition to this, the odor of spirit replaces the natural vinous or fruity aroma of the wine, and that such wines are easily detected by the unpleasant taste left in the mouth, and also by a sense of heat produced in the stomach which is not to be mistaken.

Dr. Lunier drew a strong argument as to the very injurious character of these wines, from his recent enquiries upon "*Alcoholism in France.*" In this investigation he has followed step by step the progress of *alcoholism.* This must not be confounded with "*intoxication.*"

Alcoholism is not observed among those who drink natural wines, but attacks those who use brandy or wines which have been alcoholized, as the latter differ from brandy in their effects, chiefly in the amount of alcohol which they contain. Physicians who have been able to make comparative studies in the effects of brandy and wines establish a radical difference between these two beverages (*e. g.* Hufeland, Stoeber, Laucereaux, Dujardin-Beaumetz and others).

We thus have two forms of alcoholic beverages which produce essentially different modifications of the processes of the organism. One of these is derived from natural processes of fermentation, such as wine, cider and beer, in which the alcohol is intimately incorporated with the other elements of the beverage; and the other consists of spirituous beverages and wines, made by the addition of alcohol in which it remains uncombined in the state of a foreign body. The first class may be considered as hygienic beverages. They are capable of producing intoxication if drank to excess, but they do nof produce *alcoholism.* The second class are extremely dangerous and destructive, and produce all the worst effects of alcohol, or *alcoholism.*

In order to preserve wine it is not necessary that it should contain above 2 to 2½ per cent. of alcohol; or from 4 to 5 per cent. of brandy at 49°.

"BACTERIA, AND THE FERMENTATION OF BREAD."

The question of the fermentation of bread has, up to the present time, been a disputed one; and we cannot declare it to be decided, whether it is due to a ferment or leaven, the *saccharomyces* of Engel, or to a bacterium found in the leaven.

At a recent meeting of the Royal Academy of Belgium, Prof. Laurent, of Vilvorde, communicated the result of a series of experiments which he has conducted in this direction. He gives the following conclusions:

Upon the surface of the grains of wheat, rye and other cereals, there exist the germs of a bacillus, which pass into the flour during the process of grinding the grain. This bacillus is naturally developed in the dough, and, in its development, disengages carbonic acid, which causes it to rise.

This bacillus, designated *bacillus panificans*, occurs in the form of long, straight rods, which are easily colored by methyl violet. In a solution of gelatine it readily produces colonies of characteristic form, and can be cultivated in a rarefied atmosphere, under no greater pressure than 1 millimeter of mercury.

This ferment renders the albuminoid matters insoluble, especially the gluten. It is nourished by saccharose and a faintly acid solution of boiled starch. If imbedded in the substance of the bread, at a depth of 7 or 8 millimeters, it is capable of resisting the process of baking. In bread fully baked it is abundant, and is readily detected in the stools passed after bread has been eaten.

After the bread is baked the bacillus, if the medium be not sufficiently acid to prevent it, may attack the starch and transform it into a compound analogous to *erythrodextrin*. This is the process of the production of gluten bread. If the bread be kept at a temperature of 100° c. this does not occur, nor if it be soaked with a solution of corrosive sublimate of the strength of 1 to 100. The same result follows if the bread be sufficiently acid. If the bread be made slightly alkaline, and kept at a temperature of 35° c., it becomes glutinous in 48 hours. This transformation, occurring readily at a temperature between 30° and 45° c., is influenced by the amount of acid and moisture present. The addition of a sufficient quantity of some organic acid prevents the formation of gluten bread.

The bacillus of bread is undoubtedly deposited upon the ears of wheat, rye and other grains by the winds. It may also be found upon other plants and exists in the bran as well as in the flour. In Belgium, it is the custom to make a paste with flour and a little warm water. This, if kept in a warm place, will develop in about twelve or sixteen hours quite a marked fermentation, and is employed as a substitute for preserved yeast.

ON THE TRANSPLANTATION OF THE EYE OF THE RABBIT.

BY LUCIEN HOWE, M. D.,
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[Read before the New York State Medical Society.]

In a recent number of the *Revue General D'Ophthalmologie*, Dr. Chibret described the details of an operation in which he transplanted the eye of a rabbit into Tenon's capsule. The patient, a girl of seventeen, had some ciliary pain, and other discomfort, and the eye, although it regained its sensibility partially, lost this later, and sloughed about the end of the second week. In his paper he expressed the hope that improvements in the method of the application of the sutures and in other details might yet bring up the question as to the possibility in this way of restoring the vision.

Doubtless many—by no means as sanguine as Dr. Chibret—were rather surprised that an eye thus transplanted should show the least sign of retained vitality, and inwardly resolved to repeat the experiment whenever an opportunity offer. I must confess being one of these. In the present paper, therefore, it is my intention to give an outline of a few attempts made at the transplantation of the eye, to mention the difficulties in the operation and call attention to one phenomenon quite well defined, which has passed apparently unnoticed.

The experience of Dr. Chibret in transplanting the eye of an animal into the socket of the human subject, is not such as to warrant many operations of exactly that kind at present. At least, so much evidently remains to be perfected in the procedure, that it seems wise to confine the experiments to animals, until some further advance is made in this direction.

Accordingly, my attempts have been limited to transplanting the eye of one rabbit into the socket of another, in which experiments I have been assisted by Dr. Elmer Starr and Dr. B. H. Grove, of Buffalo. This has been done but six times, yet I feel justified in calling attention to one or two points in the operation and its results.

The *first* concerns the insertion of the sutures: The attachment can be made firm by passing one thread through the muscle

close to the globe, and another through the same muscle about four millimeters from the first. The needle can be left on each thread, and the two ends of each tied together. It is also convenient to use threads of one color, for the muscles of the eye to be transplanted, and of another color for the muscles to which it is to be attached. This may appear a trivial suggestion, but in the hurry of making the transfer, when the vessels in the socket are bleeding, and several threads hang in a tangled mass from the eye, it lessens confusion if different colors, of some distinctive mark, show exactly where each suture belongs.

Second—After the division of the nerve, and the removal of the globe, it is desirable to have the transfer made as quickly as possible. When this was delayed by abundant hemorrhage or other cause the eye sloughed in about five days, but when this stage was passed through rapidly, the cornea remained clear a longer period, and some evidence of returning circulation appeared.

Third—Another cause of early destruction of the transplanted eye is the presence in its new socket of a considerable clot. Any one who has seen the amount of bleeding which follows division of the arteria centralis retinæ in the rabbit, will realize how difficult it is to bring it under control; and yet, the more thoroughly this is done the more successful is the operation.

Fourth—It is absolutely necessary, in the after treatment, that the eye be shielded from violence and the cornea be protected by the lid. In the human subject no very special precautions would probably be required to accomplish this. The rabbit, however, like any other animal, will scratch off the bandage, no matter how neatly and firmly it is adjusted. But a simple contrivance will obviate this difficulty.

A box about fourteen inches long, eight inches wide, and five inches deep—without any cover—is made with the two ends movable. One end is divided into two parts horizontally, and near the center of the line of junction, a notch about an inch deep in the lower part corresponds with another notch of the same depth in the upper part. The two together form an opening like that in the old-fashioned stocks. In this the neck of the animal can rest comfortably. When adjusted at the proper height a rabbit will often remain

in such a position for some days, eating regularly, and without the least symptoms of inconvenience. The other end of the box can be moved between the sides, lengthening or shortening the enclosed space, and when firmly secured, prevents the animal from struggling or making any effort to withdraw the head.*

As for the protection of the cornea, it was found that often the entire globe protruded to such a degree that it was necessary to unite the lids with sutures. It was noticed also that the section was lessened and the swelling made to decrease if a piece of absorbent cotton, kept cool with water, was allowed to rest on the globe. These precautions may seem unnecessary as a refinement of detail, but upon such exactness depends the attainment of even slight success. Moreover, it is quite surprising to find how much the operation is facilitated and expedited by even a short experience with these minutiæ of manipulation. In the first operation it required nearly an hour and three-quarters to isolate the different muscles, attach the threads, transplant the globe and arrange the animal in position. The last was completed in much less than an hour, and in a far more satisfactory manner. It is certain that a great deal depends upon the technique, and with the highest degree of perfection yet to be obtained in this respect it is not too much to expect that some form of an eye can be retained permanently. This brings me to speak of the result of the experiments, which was sloughing of the globe in every instance. The length of time required to produce this, varied considerably. In the earlier cases, the process of decay began almost immediately. Later it was delayed till the eighth, tenth, or finally until the twelfth day, and seemed dependent upon the causes already given.

As to sensibility being regained, it is difficult to decide this question from any motion of an animal, but I do not think it occurred, although the cornea was frequently tested; nor did I find any tendency in the globe to return to its original tension, as reported by Dr. Chibret.

An interesting and suggestive phenomenon did appear, however, and to this I wish to call special attention, namely: When the eye of a white rabbit was transplanted, it was at first entirely bleached,

* The box used was exhibited to the Society.

with no red reflex from the fundus, but occasionally the original red reflex became visible even without the aid of an ophthalmoscope. In one case this was particularly well marked, and in others could be distinguished without much difficulty.*

This appearance, slight as it may seem, would tend to show that a slight amount of circulation was reestablished and to give the shadow of a hope that with an improved method of operation, it may be possible to have the globe retained at least in part.

The importance of even this gain cannot be overestimated, and slight as the prospects of success may appear, the indications thus far are sufficient to warrant further experiment in that direction.

CHOLERA.

A NEUROSIS-HEMORRHAGE THEORY.

BY HENRY RAYMOND ROGERS, M. D.
Dunkirk, N. Y.

[Read before the Annual Meeting of Western Branch N. Y. State Med. Ass'n, May 11, 1886.]

The history of cholera reveals the fact that every form of treatment heretofore employed has proved worthless. Statistics show that 50 per cent. of all its cases terminate fatally; that a mortality of 85 per cent. is sometimes reached even under the highest professional skill; and that the disease, when left solely to the efforts of nature, without medicine or care, shows as large a proportion of recoveries as when treated by the most approved methods. These facts become startling in view of a probable invasion at an early day. Under such circumstances we are forced to inquire if such disastrous results are not possibly due to our misconception of the essential nature of the disease. Of one thing we may rest assured, that to stickle longer for the theories and the practice of the past which have led to such fatal results, would be criminal. The expectation of better results in the future depends upon an investigation of the subject from a wholly new standpoint. This investiga-

* A rabbit was presented to the society for inspection, one of whose eyes had been removed four days before, and another transplanted in its place. The lids of this were slightly swollen, the media clear, iris of its normal color, but the pupil immovable. From the fundus it was possible to discern a reddish white reflex: No test showed the least sensibility to light.

tion must necessarily found itself upon existing data, furnished to our hand by the history of the disease, its symptoms and its cadaveric autopsies.

The history of this disease shows that it is spontaneously developed in India; that it does not necessarily originate in one spot alone, but at times starts up simultaneously in widely separated districts, and then diverges in all directions. While it is useless to discuss the first cause of cholera, it is rational to suppose the existence in the atmosphere, during a cholera epidemic, of some subtle, morbific principle which manifests itself in the production of nervous prodromes, as malaise, sense of prostration, nausea, etc. "To the experienced physician the appearance of malaise indicates approaching danger as a fall of the mercury in a barometer indicates it to the sailor" (Murray). The careful study of this disease leads to the inevitable conclusion that it is largely due to meteorological or atmospheric causes. Meteorological influence as a cause of disease has been heretofore practically ignored, yet, ere long it will be recognized as not only *a* power, but as *the* power, far overshadowing all other causes combined. The possibilities of meteorological action for transmitting subtle elements, harmless or morbific, are shown in the rapidity with which the so-called "red sun-glow" spread from a point in the East to all parts of the globe.

The hypothesis that cholera in its essential nature is a pure neurosis, a disturbance of the general innervation, now offers the most satisfactory philosophy of the disease. This hypothesis is fully sustained by its history and its symptoms, and there are no facts which controvert it. This philosophy of explanation was first publicly advanced by the writer in a paper published in the *Chicago Medical Journal and Examiner*, April, 1876, also before the American Medical Association in June, 1876, at Philadelphia, and is rapidly gaining ground with the profession. Viewed as a neurosis, its phenomena at once became freed from mystery. Its prodromes tell of nervous prostration. In a large proportion of cases fear, the great nerve depressor, leaves the system open to attack and determines a fatal issue. Its cramps are purely a nervous phenomenon, and its vomitings are neurotic,—simple regurgitations.

The most prominent symptom, the one which appears to overshadow and involve all the rest, is plainly due to a disturbance of innervation; namely, its serous discharges. These discharges make their way through the walls of every blood-vessel from the aorta to the finest venule in the body. In view of the rapidity and profuseness of these discharges, we are led to inquire, By what process may such a flood be thus rapidly separated from the vital circulating current? The answer is, certainly not by any intrinsic change in the composition of the blood itself, as that would result in the sudden extinction of life; not in any spontaneous separation of its thicker and thinner elements, followed by the expulsion of the latter, as no fluid, however tenuous, can make its way through the walls of the blood-vessels while the tissues which constitute those walls remain in a normal condition. We are, therefore, forced to the conclusion that the patulous condition of the walls of the blood-vessels which permits such exudation, is due to perturbation or relaxation on the part of the nerves whose normal function it is to maintain the tonicity of those walls. Thus the current through which the life ebbs away has its source in a disturbed innervation. We therefore find abundant demonstration that cholera is essentially a neurosis.

The most vital symptom in this disease, as already shown, is the rice-water excretion. The great life-current is robbed to supply these discharges, and the bowels, stomach and skin are but mechanical channels through which its conveyance takes place. The rapid abstraction of a single constituent of the blood, as the serum, becomes disastrous in the same manner as when the full blood itself is lost in the more common forms of hemorrhage. These discharges, therefore, constitute essentially a true hemorrhage. It is passing strange that this rice-water phenomenon has never been recognized as an actual hemorrhage, with all that such a hemorrhage implies. Nearly all of the graver symptoms and conditions incident to the disease, as also the changes observed in the cadaver, are explainable upon the hypothesis of actual hemorrhage and, we are warranted in asserting, *only* upon that hypothesis. But, owing to the failure to discriminate between the functions of the red corpuscles and the white discs, the two chief constituents of the blood, this philosophy

has not been applied in explanation of the disease. The vital forces depend largely upon the action of the red corpuscles, for through these chiefly is effected the oxygenation of the blood and the consequent revitalization of the system. A small loss of this element is often speedily fatal. On the other hand, the serum, or white element, which constitutes the bulk of the blood, apparently possesses less vital functions and its abstraction becomes neither so quickly nor so seriously apparent. Enormous quantities are sometimes separated from the circulatory current without fatal consequences. The disregard of the true hemorrhage character of these discharges may account for the strange misconceptions which have heretofore prevailed in regard to the true essence of the disease. If a hemorrhage, then is it the more insidious and dangerous from the fact that its exudations are colorless, and from the further fact of the immensity of the area through which they take place.

It is essential to the healthy action of the brain that it be supplied with currents of blood normal in constitution and in full measure. The sudden disturbance in its equilibrium in either of these respects is capable of producing serious and sometimes fatal effects. The rapidity and profuseness with which the rice-water discharges take place are characteristic of this disease, and in degree they are not unfrequently phenomenal. In a case in which apparently the attack and the fatal termination occurred within the space of thirty minutes, the bowels were found distended with rice-water exudations and plugged with a hardened fecal mass. A patient in perfect health, while sitting at the table, was almost instantaneously seized with the desire to evacuate the bowels. The first movement was described as apparently comprising nearly all the fluids of the body. Another evacuation of great profuseness quickly followed, and, when visited within less than thirty minutes of the commencement of the attack, she was found unconscious and pulseless. Such instances may be cited indefinitely. In consequence of the lessened bulk of the circulating current the heart struggles to make up for such deficiency by an increased rapidity of its pulsations, but, itself being weakened by the drain upon that current, fails to furnish the system with its adequate supply. These facts explain the gravity and fatality of the disease; the brain and nervous system losing their

requisite support, fail to perform their accustomed functions, and the subject dies of exhaustion.

If the philosophy herein advanced be true, if the disease be essentially a neurosis, if the principal and most fatal symptom be a true hemorrhage, then the matter of treatment becomes already determined. The treatment which has been heretofore confessedly empirical, must now give place to the scientific and exact. The general principles of treatment which apply to the more common forms of hemorrhage become the basis of treatment of cholera-hemorrhage. The most important consideration in the treatment of cholera, therefore, is *position:* horizontal in its milder forms or stages, and inclined, with the head slightly lowest, in grave attacks. Position is of such essential importance in the treatment of this disease that the result either of life or death not unfrequently depends upon the efficiency with which it is carried out. Murray's words are pregnant with import when he tells us that, "once sitting up in bed sometimes causes death in this disease." During the prevalence of an epidemic the horizontal position should be resorted to immediately on the appearance of either painless vomiting or diarrhœa. If this precaution is deferred until the symptoms become more grave it may prove too late. A disregard of these warnings becomes the most fruitful source of danger, as a large proportion of mortality arises from the insidious character of its approach. It should therefore be well understood that no diarrhœa or vomiting is harmless during a cholera epidemic. No attack, however mild, is free from the danger of suddenly and without warning passing into its gravest forms. In view of the foregoing philosophy of the disease, the indispensable necessity of position as a procedure in its treatment becomes self-evident. Although comparatively new to the profession it has nevertheless been employed by me in a sufficient number of cases, and with such striking and favorable results as to demonstrate its inestimable value. First thus employed in my own person in the epidemic of 1854, and since, in the treatment of my cases.

Little can be expected from the treatment of cholera with internal remedies, except in its earlier stages, or in its milder forms. When we consider that the physiological action of the mucous

membrane is reversed in this disease, that exosmosis takes the place of endosmosis, the inefficiency of this method becomes apparent. Opium and its preparations are, perhaps, the remedies which may be most confidently relied upon to change the perturbed condition of the nervous system and to close up the diminutive orifices through which the life-current ebbs away. The difficulty, and in the majority of the grave cases, the impossibility of controlling the action of the system through the operation of remedies internally applied, compels their use by other methods. The great hope and expectation of future success in the mastery of this disease now centers in the little instrument, the hypodermic syringe. The reports of cases thus treated in Asia, Australia, Europe and in various parts of our own country show almost uniformly favorable results. Morphia thus applied in doses of one-eighth or one-sixth of a grain, and at long invervals, with position, external heat, frictions and the free internal use of ice or coldest water, offer the best possible results. This disease does not tolerate large doses of opium or morphia. Cramps, if severe, are more safely treated with chloroform or ether by inhalation. With the recognition of this disease as essentially a neurosis-hemorrhage, and all that such conditions necessitate, the treatment may be most judiciously conducted according to well known and established general principles.

The highest practical advantage which the foregoing theory of this disease offers, lies in its suggestions of treatment which may be readily comprehended and successfully applied in an emergency, where the services of a physicion cannot be obtained. Its success, therefore, must be sought for in the most widespread dissemination of a knowledge of its principles and its practice amongst the masses, by the profession and the press.

In the light of the philosophy of explanation of this theory the distinctive title, "The Neurosis-Hemorrhage Theory," will be recognized as comprehensive and fitting, since at a glance it conveys a clear and definite idea of its essential nature, its most fatal condition and the true philosophy of its treatment.

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THE BUSINESS MANAGER OF THE MEDICAL PRESS.

When THE MEDICAL PRESS ASSOCIATION OF WESTERN NEW YORK was organized Dr. A. M. Barker kindly undertook the troublesome yet important details of its business management, with a stipulation that as soon as its business affairs should be suitably regulated and simplified, and its stock advantageously disposed of, he should be allowed to retire. This time having arrived, at a recent meeting of the Trustees of the Association Dr. Barker's resignation was accepted, after reading his report, with a hearty vote of thanks for the time and pains which he has devoted to the enterprise. In this report a most encouraging state of business affairs was revealed, and one upon which every friend of the journal may congratulate himself, due largely to the prudent and creditable business-like way in which it has been managed.

Dr. Barker's successor, who was unanimously elected by the Trustees, is Dr. Chas. G. Steele, a gentleman who was for years connected with the daily press of this city, and who, in various business ventures of his own, has shown not only true journalistic talent but business ability of a high order. We recommend him to our patrons—advertisers and subscribers—feeling sure that he will afford satisfaction to them, and will in every way advance the interests of the journal. His address is 186 West Genesee St.

PASTEUR AND HIS RECENT WORK.

Probably the scientist who is to-day exciting the most comment, and whose name is oftenest in the mouths of the laity, is Pasteur. It has, perhaps, never fallen to the lot of one man to be of such national and international use by means of purely scientific work; as witness the millions of dollars which he saved for stricken France when he discovered the cure for the *pe-brim* or silk-worm disease; which of itself must be abundant answer to the "practical men" of the day who question whether scientific investigation *pays*. By his researches concerning chicken-cholera and splenic fever he still further extended not only his own reputation but the utilitarian benefits of science. Pasteur has ardent admirers who claim that he is infallible; he has also, especially in Paris, many jealous enemies who denounce him as a scientific impostor. Nearly all his work will safely withstand the most scrutinizing criticism until we come to his latest investigations upon hydrophobia. Here we may call a halt and exclaim "not proven"; but whether the future may corroborate or disprove his claims time alone may tell.

Reasoning from analogy it is not going too far to allow that vaccination against rabies may prove successful. Reasoning from positive data we have at hand, at date, we do not yet see how such a claim can be made incontestable.

Glowing descriptions have reached this country of the extreme care and attention to details which characterize the work done in his laboratory; but the same should be said of every good working laboratory and its master spirit. Nothing quite akin to his method of preparing the cords of animals whom he has inoculated has been previously demonstrated, and this alone has made his work more difficult of acceptance. This objection, however, can have no weight against positive evidence.

That Pasteur is not deaf to all the hostile criticism, is evident from an interview which the correspondent of the *Boston Medical Journal* has recently had with him, in which he observed that the drift of opinion in America seemed to be that it is necessary to wait for proofs of protection in those already inoculated.

"Wait?" he said, "I have no objection. *I* am waiting. But consider this: In October last I began systematically to inoculate human beings. Up to this moment (April 29) we have inoculated 907 persons. How many deaths? One.

One only (for the Russians cannot justly be counted), and when this one (the Pelletier child) came to me it was too late. Before I began to inoculate human beings, how many of those bitten by mad dogs in France died? Sixteen per cent. Since last Obtober only one death in 907 cases! What more can you ask? Scientific men once doubted my having discovered a means of preventing cholera in chickens and charbon in sheep. When I announced my discovery at the International Medical Congress in London, Koch said, 'Pooh!' and Chauveau simply loaded me with sceptical objections. Do they do it now? Let the fact that 500,000 sheep are inoculated every year in France for peasants who fight to save a two-sous piece and yet must pay four sous per head for inoculation every spring, be the answer. The Germans are angry, especially Koch, because France has the merit of this new discovery of protection against rabies. They think because they conquered our country in 1870, that they can be our masters in this field, and therefore they spread broadcast their scepticism against me. They lack generosity. They are behaving like children."

A little charity may easily be extended for the petulance which the last sentences show.

On the other hand, we have very recently had a letter from a private correspondent in Paris, who has studied his methods in his laboratory, and who is eminently qualified to judge dispassionately, from whose letter, though not intended for publication, we quote the following:

"My chief reasons for scepticism are these:

"*First.* Of the large number of persons bitten by dogs *said to be rabid* we are *not sure* that in every case the dogs are rabid, since the animal is usually killed immediately, and no *crucial* experiment is made to prove his rabies; hence a *reasonable doubt* exists as to the rabies both of dog and patient.

"*Second.* Rabies, in dogs and men, is now one of the fashions in medicine. There is no reasonable way of accounting for such a number of rabid dogs and wolves so suddenly appearing. The *apparent* discovery of a cure for rabies by a remarkably reliable observer seems to have been the chief *exciting* cause; the *predisposing* cause having existed, from time immemorial, in the imaginative faculties of the human intellect [conspicuously so among the French.—*Ed.*].

"*Third.* While Pasteur is able to propagate rabies in rabbits, in an unbroken series, he has not extended it *from this source* to other animals or *man.* No *man* has been inoculated and rabies produced and then controlled by his system. We do not even *know* that he

can produce hydrophobia in the human species by inoculation with the virus from the rabbit that died of it. I am aware of his belief that it *can* be done, and of his fear of using the potent virus, but this, and several questions immediately concerned with it, lead me to be slow to accept the entire theory. I am ready to wait a little longer. Later, when we meet, I will give you, in detail, what I have seen, and with great care, at his laboratory; for I have been there, not as a sceptic, but as one ready to be persuaded by proof. Certainly he has been scrupulously careful in every detail of his processes, as far as I can see, but, as I have said, I must wait longer before accepting the matter without reserve."

We think our correspondent has exactly voiced the sentiment of every thinking man, and that his remarks are eminently thoughtful yet impartial. Meanwhile let us keep our minds in judicial condition, without prejudice, waiting patiently for the light which time will surely throw on this most vexed of modern therapeutical problems.

* * *

From the Russian journal *Medycyna*, of May 8, we learn that there died in hospital at Wloclawek, of rabies, a Russian peasant woman whom Pasteur had sent home cured. She was bitten by a wolf on March 25, and thirteen days later was sent to Paris, returning the 22d of April. On the twenty-ninth day after the bite she became suddenly despondent, developed the usual symptoms, and in two days was dead. As nearly as we can definitely learn, from the province of Wladimir eight persons who had been bitten were sent to Paris, of whom two died before May 1. From Smolensk eighteen were similarly sent, of whom three died in Paris.

If we will only remember that by no means all who are bitten by rabid animals die of hydrophobia, it may be well inferred that Pasteur's inoculation system can hardly yet be declared a certain prophylatic.

* * *

One of the severest of his American critics, Dr. Dulles, has taken pains to point out several inconsistencies in his statements and methods which are worth bearing in mind. Pasteur at first claimed that his method would prove prophylactic at any time before the

outbreak of the disease, even if two years elapsed; but he was compelled by the deaths occurring under his hands to reduce this period to thirty-five days, and later he cut it down to *fifteen.* Again he has utterly abandoned the only natural virus of rabies, *the saliva*, and uses an artificial irritant, a bouillon in which dead spinal cord has been suspended, and this he injects into rabbits and men. In man it has caused virtually no symptoms, but in rabbits it causes a series of symptoms more like a sapraemia or form of sepsis than like hydrophobia, for the animals become lethargic and die in a paralyzed condition. His critic does not hesitate to claim that Pasteur's lack of medical education and training make him unfit to judge of such a matter, and that he has, consequently, mistaken a toxaemia or septicaemia for hydrophobia.

* * *

Apropros of this subject, we think it worth while to append some interesting gossip from a letter to the *Virginia Medical Monthly* by that American physician who has done us so much honor abroad—Dr. Edward Warren-Bey.

"The *vaccinations of Pasteur* are the wonder of the hour. One singular fact I must mention in this connection. Not being a physician, he cannot employ his own remedy without violating the law, and becoming amenable to fine and imprisonment. On inferior animals, he is at liberty to experiment *ad libitum;* but for the *genus homo* he finds himself compelled to employ a medical assistant, so as to escape the penalties presented for the illegal practice of medicine. In France no one can write a prescription or perform the simplest surgical operation unless he is the possessor of a French Diploma or a Ministerial Authorization, that is, a stamped paper signed by the Minister of Public Instruction, recognizing him as a physician; and Pasteur himself could not obtain the latter, to such an extent has the faculty carried its antagonism to the issuing of such permits. This opposition is envy—in the jealousy of the native doctors towards the foreign physicians who have settled in Paris and monopolized the practice of their own compatriots, which pays infinitely better than that of the French.

A Frenchman has to climb very high on the professional ladder before he can venture to charge one of his own people more than ten francs (two dollars) per visit, while every foreign physician engaged in practice has invariably charged his fellow countrymen double that sum for the same service. For an *accouchement* the ordinary recompense of a native physician is francs 125 (twenty-five dollars), and of a foreigner francs 1,000 (two hundred dollars). Besides, strangers usually pay cash for medical services, whereas residents expect a credit of from six to twelve months, and usually grumble over their bills at that. Hence the jealousy to which I have referred as the *fons et origo* of the present crusade against ministerial authorization upon the part of French physicians. If their alien *confréres* were out of the

way this rich harvest would necessarily fall into French hands, and, with the design of securing it inevitably, the faculty has adopted the plan of preventing the farther licensing of foreigners in France, and of permitting nature to clear the field of those who already occupy it by the intervention of that certain agent, the hand of death."

A CAUSE OF SUDDEN DEATH AFTER OPERATIONS.

There occur deaths after various operations, when every precaution has been taken, which seem inexplicable. They seem to depend little, if at all, on the nature of the operative interference, and an autopsy not made with most extreme care fails to reveal anything which may be assumed to be the cause. M. Verneuil reported in 1881* a case of speedy death after operation for strangulated hernia, which he attributed to pulmonary congestion; nevertheless even this lesion was held by those who took part in the discussion to be insufficient to cause a fatal termination under the circumstances he detailed.

At a meeting of the Société de Chirurgie held March 24, of this year, M. Ch. Monod made a communication† which may serve to throw light on this matter. He reported a case of hernia upon which he had made kelotomy, a woman aged seventy-two, who never rallied from the operation, but lapsed at once into a condition resembling shock, then into coma, and death ensued within a few hours. A most painstaking autopsy was made, in the course of which it was shown that the reduction of the hernia had been perfect, and that there was no lesion of intestines nor peritoneum. The two lesions which seemed to explain the fatal termination were interstitial nephritis and œdema cerebri; the latter held to be due to the former. Commenting on this case he spoke of the ease with which this might have been passed off as a fatal case of shock after operation or anæsthetic, had not the section disclosed a condition, by no means conspicuous, yet amply sufficient to explain the facts.

Raymond, in studying similar accidents among the aged, arrived at conclusions‡ which have an important bearing here. He was

* Bull. et mém. de la Soc. de chir. 1881, VII., 523.

† *Ibid.* 1886, XII., 222.

‡ Revue de Médecine, 1885, Sept., p. 705.

able to demonstrate a *slow uræmia* ("urémie lente"), not easily recognizeable, insidious in attack, without convulsions or other prodromata. One form, in which this condition presents, is something like this: An individual of apparently excellent previous health, who has never had gastric disturbances nor convulsive attacks, who has been obliged to micturate a little oftener than normal, and who has displayed a slight tendency to vertigo and dyspnœa, either suddenly loses consciousness, or becomes rapidly enfeebled, with marked hebetude, but without paralysis. Coma follows quickly in the former case, a little more tardily in the latter, and death occurs in a few hours or a few days, or, as Monod puts it, actual death succeeds apparent death.

In such case one might well suspect cerebral hemorrhage or extensive rapid softening. But on autopsy no cerebral disturbance will be found, save œdema, perhaps associated with a little ventricular hydrocephalus. On examining the viscera all will be found healthy, save the kidneys, in which the change is always the same; nephritis, usually interstitial, approaching the type of senile nephritis, *i*, *e*. kidneys small, granular, nearly always more or less cystic, with adherent capsule, showing microscopically diffuse renal sclerosis, fibrous changes in the glomeruli, advanced arteritis of the smaller vessels and even atheroma of the larger, with fatty degeneration of the tubuli.

It seems quite certain that the cerebral œdema is the result of the renal changes, but is itself the cause of sudden death in these cases. It is not pronounced enough to kill by direct compression symptoms, but exercises sufficient constraint upon the capillary circulation to produce a cerebral anæmia ("anoxhémie") incompatible with life. This state of affairs, already imminent in a person of advanced years, may be easily hastened by surgical disease, by an anæsthetic, or, more likely still, by both combined, and the resulting natural amount of shock.

As all surgeons allow, the term *shock* is but a confession of ignorance, and we welcome all such thoughtful and suggestive studies as this by Monod, which may help to clear away the mist through which we strive to see our path.

In the April number of The Medical Press we published a most interesting letter from Dr. Cochran, who is doing such excellent work in Oroomiah, Persia. In this issue we present another which will be found not only interesting, but to contain an account of the native method of radically curing hernia which we think has never yet appeared in any scientific publication.

Dr. Cochran takes exception to our editorial statement in the same number that he is the only scientifically educated physician in Persia, and desires that it be corrected. It seems that in four other Persian cities there are European or American physicians. In Teheran, the capital, the Shah's physician is a very able French gentleman. The English Embassy has an English physician, as has also the Indo-European Telegraph Co., while Dr. Torrence was sent there by the American Missionary Board some four years ago. The same board sent Dr. Alexander to Hamadan about three years ago; while at Tabriz, about 160 miles from Oroomiah, live Dr. Cochran's nearest competitors, an Italian, and Dr. Holmes, formerly of Cedar Rapids, Iowa.

We make these corrections very cheerfully, and are glad to realize that the Persian empire is better off by several educated men than we had supposed.

* * *

A little less than a year ago the generosity of Mrs. Gates, of this city, added to the resources of the General Hospital a pavilion to be exclusively used for laparotomies, and to be known as the Gates Laparotomy Cottage. As showing the great advantage of such a building we would say that since the first of January sixteen abdominal sections have been made at the Hospital without a death.

* * *

A host of professional and lay friends have welcomed back to his home Prof. Rochester, who was forced to seek a warmer climate during our severe spring weather. He returns fully restored to health, and is once more at work.

Correspondence.

LETTER FROM PERSIA.

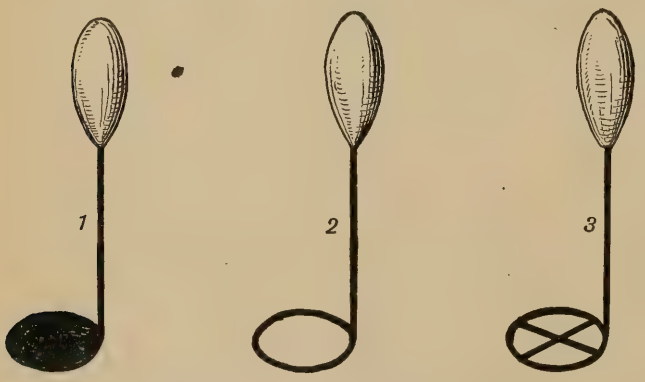
Native Methods for Radical Cure of Hernia.

OROOMIAH, PERSIA, May 6, 1886.

EDITOR MEDICAL PRESS:

The actual cautery is quite frequently used here for the radical cure of hernia, inguinal and femoral. A short description of the operation may interest some of your readers.

We will take for example an oblique inguinal hernia. The intestine being reduced, the borders of the external abdominal ring are traced with ink, as a guide in the application of the hot iron. A thick ring of dough and somewhat larger in diameter is then placed around the part to be cauterized, to protect the adjacent tissues. The instrument used consists of a rough iron ring, $\frac{1}{4}$ of an inch in breadth, and sufficiently large in diameter to include about $\frac{1}{8}$ of an inch of the borders of the abdominal ring. It has an upright piece surrounded by wood for the handle, *fig. 2;* or it may be a solid disc, *fig. 1;* or else a ring with cross-pins in it, *fig. 3.* The patient is now made "dead drunk" with arrack; or else, and especially if it be a child, is held perfectly still by a number of strong assistants. The iron is brought to a dull red heat, and with all the neighbors, men, women and children who can crowd into the room where the struggling patient lies on the floor—the operation begins. The surgeon holds the instrument an inch above or over the part and as the surface is scorched and the iron has cooled somewhat it is placed within the ring of dough and directly upon the breach in the abdominal walls. After it ceases to burn the flesh it is again heated and the operation is repeated.



The after treatment consists in healing the ugly burn gradually.

It is thought necessary that the wound heal slowly, in order that the cicatrix be large, deep and firm—to this end an ointment composed of 10–20 ingredients is employed, or else split peas are laid over the surface for ten days, after which time the sore is allowed to dry up as quickly as possible. For the first three days the patient is allowed to walk, but after that and until the cicatrix is firm, he is compelled to lie on his back. No attempt further than position and the contracting cicatrix, is made to retain the intestine in its place during the healing process, except in children who can't always be kept on their backs. Infants are always bound on their backs to their cradles, in Persia, so that after being operated on they are kept quiet in the usual way.

The Results.—As will be seen, the idea is to obtain so firm a contraction of the abdominal ring and so firm a pad over it (the cicatrix) that the hernia will be kept from protruding. I hoped to give you the results of a number of operations in this letter, but have failed to collect reliable statistics. I will report again. Three men I know are perfectly cured. Operation was performed in adult life. Two children, seven and nine years of age, one having been operated on when three years old, and the latter two years ago, have a firm cicatrix in the inguinal region, with no protrusion. With all my inquiries, I have yet to learn of a fatal case. Many are said to have been entirely cured.

In order to see this operation performed, I admitted to our hospital a man, March 6, 1885, who had an oblique inguinal hernia for ten years. He wished to be operated upon by this operation, so I invited a native surgeon to perform it, which he did in the manner described above, with the exception that we gave the patient chloroform. Twenty-four hours after the operation this man had a temperature of 102½°. He showed no other symptoms of constitutional disturbance. The first two nights he had ⅓ gr. of morphia at bedtime. On the fifth day the slough came away, leaving a deep clean wound two inches in diameter. This case proved a failure. The cicatrix does not keep the intestines back. The surgeon thinks he should have employed instrument No. 1 rather than the plain ring, since the hernia was a large one, and the abdominal channel of exit correspondingly large. Truly yours,

J. P. Cochran.

NEW YORK, June 5, 1886.

EDITOR MEDICAL PRESS:

Dear Doctor—I have thought it might interest some of your readers to know of the clinical opportunities offered at the post-graduate schools here. In the hospitals and dispensaries of the city over 500,000 people are treated annually, and to those who desire to come here for study it will be apparent that the clinical facilities are practically unlimited.

At most of the hospitals there are clinic days, when practitioners are cordially invited to attend. Laboratory work has become one of the features of New York medical instruction, and each one of the three regular schools maintain admirably fitted departments for investigations in bacteriology, pathology and histology.

During the past few months I attended many lectures at the College of Physicians and Surgeons, Bellevue College, and the Medical Department of the University of New York, and as a matter of course I have drawn comparisons between them and the Buffalo College. I find that, while the courses here cover a greater period of time, which allows the lecturer to more thoroughly elaborate his subject, that for thoroughness and completeness the men here are not one whit ahead of those of Buffalo University. The student who has worked faithfully in Buffalo need have no fear for his future, nor need he fear that his instruction has been below a very high standard. Of course there is more clinical material here, but the clinics—medical and surgical—at the Buffalo General Hospital compare very favorably with all of those I have attended. On the whole, I am convinced that Buffalo has every reason to be proud of her medical school and the good work that is being accomplished by its teachers.

I recently saw Dr. Sands remove the entire scapula at Roosevelt Hospital. At first he proposed removing only that part of it which seemed involved with a sarcomatous growth, but after a few incisions had been made he decided to take out the whole bone. It was a difficult operation, but was most skillfully done.

The fashionable gynæcological operation, at present, is that devised by Alexander for the shortening of the round ligaments of the uterus in severe cases of retro-flexion and also for prolapse. I have

seen Dr. W. M. Polk perform the operation four times, and his results have been excellent. I saw Dr. Paul F. Mundē do it once. Dr. Polk sews the ligaments to the fascia over the pubes, while Dr. Mundē attached them to the pillars of the external abdominal ring.

Yours truly,

CHARLES G. STEELE.

CHICAGO, June 10, 1886.

EDITOR MEDICAL PRESS:

Dear Doctor—Revisiting Chicago, after an interval of six years, the writer was impressed with the progress made in medical circles. There is now perceptible in this city what may be termed a medical atmosphere, an indefinable something that will scarcely be noticed by a medical observer in any other cities of this country, except New York and Philadelphia.

In the six years last past the medical element of Chicago has developed beyond the stage of personal gain, and reached that of public benefit. Physicians there are not now telling of the number of prescriptions written in a day, so much as they are detailing anomalous conditions met with.

To be sure, even a professional man, breathing a truly professional spirit, cannot live in Chicago without becoming imbued with a business fervor; consequently nearly all physicians have a down town office as well as one at their residence. This peculiarity is very noticeable, as sometimes as many as twenty-five physicians are grouped in down town offices over a drug store. St. Louis is the only other city where this concentration of physicians' offices down town, and over drug stores, occurs so conspicuously. While in this feature Chicago differs from Eastern medical centers, she now resembles them in multiplied agencies through which physicians render the public gratuitous service. Besides private institutions there are four large public dispensaries in vigorous operation, treating thousands of cases annually. In addition to these there are thirteen public hospitals, receiving, altogether, the gratuitious services of over three hundred physicians. Among medical colleges Rush stands at the head with a class of about five hundred, with some

half dozen others, having about the same number of students divided among them.

The faculties of these institutions number nearly one hundred and fifty, making some twelve hundred people yearly engaged in the study of medicine.

Six medical societies and an unknown number of clubs are maintained, and eight medical journals are published in the city. With this mass of public work and the large number of men thus engaged, it must be evident that a far different professional spirit would be engendered than without such agencies.

Chicago must therefore be recognized as the medical center of the West. Undoubtedly one of the agencies tending to produce this result is the State medical law, for in marked contrast to its previous condition is the present absence of charlatan advertisers and nostrum doctors.

Congratulations, then, to Chicago, and to her busy workers in medical fields, upon her promises of medical progress in the near future.

WILLIS G. GREGORY.

Society Proceedings.

ERIE COUNTY MEDICAL SOCIETY.

Semi-Annual Meeting, June 7, 1886.

Reported by Charles G. Steele, M. D.

Dr. E. T. Dorland, the president, in the chair. There were no reports of importance received from any of the committees.

Dr. Dorland said that it was a great pleasure to know that Dr. Thomas F. Rochester had entirely recovered from his severe and protracted illness. Dr. Dorland thought it would be greatly appreciated by the members if Dr. Rochester would address a few words to them.

Dr. Rochester gave a history of his illness from February 17, 1885, when he was thrown from his cutter, up to to the time of his recovery. He had been a sufferer from asthma, which had been followed by effusion into the pleura cavity on the right side. The

fluid was drawn off eleven times, and there were about nineteen quarts in all. During his absence in the south Dr. Rochester visited Thomasville, Macon and Augusta, Ga., and Aiken, S. C. The doctor had been particularly delighted with the latter place and improved very rapidly while there. He believed he had entirely recovered; an opinion also held by Dr. Giddings of Aiken, Dr. Pepper of Philadelphia, and Dr. Burwell of Buffalo. Dr. Rochester said he was very thankful that he was able to be with the members of the society again.

On motion the society tendered Dr. Rochester its most hearty congratulations on his recovery, and expressed great satisfaction that he had returned to his field of professional labor.

The following named gentemen were unanimously elected members of the society: Drs. Edwin H. Norton, William C. Callanan, Thomas M. Crowe, Arthur W. Hurd, H. H. Bingham, B. W. Cornwell, Thomas F. Dwyer, Elmer E. Starr, Edward L. Gager and John T. Pitkin of Buffalo, W. A. McFarlane of Springville, and Mark M. Brooks of Colden.

The following names were presented as applicants for membership: Drs. E. J. Murphy, Edward L. Smith, George M. Wetherell, Gustav A. Pohl and Charles G. Steele of Buffalo, W. E. Robbins of Hamburg, and W. E. Jennings of Boston.

Dr. A. R. Davidson moved that the Committee on Legislation be directed to oppose the granting of further monies by the Board of Supervisors to dispensaries in this city. The legislature at its last session passed a bill allowing $3,000 to be divided between certain dispensaries, provided the Board of Supervisors deemed it proper to give them the money.

Dr. W. W. Potter, after the motion of Dr. Davidson had been considerably debated, offered a substitute to the original motion, which though worded somewhat differently conveyed almost the same meaning, in that it opposed the further granting of money to dispensaries.

After a thorough discussion, which showed an almost unanimous feeling that physicians who wished to organize dispensaries for personal benefit should pay all the expenses, Dr. Davidson's motion was carried.

The society then adjourned.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

June 1, 1886.

Reported by Gros. R. Trowbridge.

Meeting was called to order by Dr. W. W. Potter. Dr. Elmer E. Starr was proposed for membership. Dr. Wheeler was unanimously elected a member. Dr. Bartlett then taking the chair, the president read the essay of the evening, on "The Use of the Uterine Sound." He stated that Simpson first called attention to the uterine sound in 1843, commending it as an aid to diagnosis, speaking of the methods of diagnosis of the retroverted uterus and the use of the sound as a repositor. He also spoke at some length on the damage inflicted on the healthy woman by the careless and ignorant use of the sound, mentioning several cases in which he had seen almost irreparable harm done. He thought that the sound should never be used except in cases of extreme doubt. "In fact, I have so seldom of late used it that I should be almost ashamed to exhibit my instruments to you, so rusty have they become from disuse." Lawson Tait, in a recent paper, said: "The French have of late used the speculum too freely, while on the other hand the English have abused the sound." Dr. Potter said he considered both of these statements true, and in addition he quoted again from Tait's paper, stating that author's ability to diagnose the majority of uterine troubles by the use of the finger alone. The essayist did not think he could fully endorse this statement. In conclusion, he said that consulting the testimony of several years' experience, in his opinion, the uterine sound was greatly overused.

Discussion.—Dr. Grosvenor said he did not agree with all the author had said, as he had accomplished a great deal with the sound. He mentioned one case where he had used the instrument 300 times and by its means had saved the life of his patient.

Dr. Hartwig condemned the use of the sound, and said he thought an educated brain and finger were far preferable.

Dr. Strong said if it had caused as much trouble as Dr. Bartlett had stated, he thought it was from careless use, and on this account should be condemned, although in cases of unsuspected pregnancy,

he said, a common catheter could do as much damage as the sound.

Dr. Mary Moody gave some rules she always followed: 1st, she never used the sound unless absolutely necessary; 2d, never when she suspected pregnancy; 3d, she never tried to move the organ, and used the sound principally for applications.

Dr. Mann said it could do a great deal of good and a great deal of harm. He related a case where a physician had passed a sound through the uterus and on *post-mortem* three holes were found in the fundus uteri.

Dr. Howe read a paper entitled, "Bacteria and the Eye." The doctor called attention to the simple methods of bacteria culture, showing a number of specimens, and also a rabbit upon the eye of which bacteria had been sown.

Dr. Roswell Park then exhibited a set of O'Dwyer's improved instruments for intubation of the larynx, and made a few remarks on the indications for intubation and the method of its performance.

THE UTICA MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

Reported by J. G. Kilbourn, M. D., Secretary.

The regular meeting of this Association was held Monday, June 7, at the residence of Dr. A. R. Simmons. In the absence of Dr. Hunt, President of the Association, Dr. Ford was chosen president *pro tem.* Dr. J. D. Jones read a report of a case of "Local Peritonitis, with septicæmia following the high forceps operation." Mrs. ———, a primipara, aged thirty years. The waters broke at the outset, and at the end of twenty-four hours, the os being only about two-thirds dilated, and nearly all of the ordinary means for producing dilatation having been tried without success, she was with difficulty delivered with forceps. Three hours afterward she was seized with a violent chill, which was followed by a sudden rise of temperature, and the other symptoms of peritonitis which gradually merged into those of septicæmia, death occurring on the fifth day.

In the discussion which followed, rest and opiates were generally recommended, while some advocated venesection if other dilating agents failed.

Dr. W. E. Ford then reported a case of tetanus that he had seen in consultation. The patient was about thirty-five years of age, the mother of several children, and had miscarried in the second month, five days before. The membranes, with the exception of a small portion of the placenta which was removed the following day, were expelled at once, no instruments being used at any time. Antiseptic douches were prescribed and the patient visited daily until the third day, when, as she was up and about, the attending physician dismissed the case with instructions to call him if any unfavorable symptoms developed. The fifth day he was called in and found the patent suffering with pain in the shoulders and back of the neck. Her head was drawn backwards, and she was unable to open her mouth, and could swallow but little. Dr. Ford saw her the next day and found the muscles of the mouth and neck rigid; slight opisthotonus and choking if she attempted to swallow. Pulse 80, and temperaature normal. No hyperæsthesia; pupils normal. There was no tenderness in the region of the ovaries, and the uterus was found in a natural condition. No vaginal discharge. There was no history of trammatism of any kind and no aversion to water. Opiates had been administered and mustard sinapisms applied to the back of the neck without benefit. She was ordered to be put on atropia and bromide of morphia, but continued to grow worse and died the following morning in a convulsion—the only one she had. No autopsy. The case seemed to be one of tetanus, and yet no nerve injury could be found.

Book Reviews.

Wood's Library for 1886. New York: Wm. Wood & Co.; Buffalo, J. H. Matteson.

We have upon our table the first four volumes for 1886 of the literary enterprise now so well known as "Wood's Library." While they have been late in publication their character and appearance may easily atone for this delinquency. Handsomely bound, some of them profusely illustrated, they are not only ornamental on the doctor's shelves but of the greatest service to him in his studies.

In fact, to our mind, they promise that the twelve volumes for the current year shall be the most instructive set that has yet appeared. While we have scant space for more than mention of them, we cannot forbear a brief reference to each.

THE GENUINE WORKS OF HIPPOCRATES. Translated by Francis Adams. Vol. I.

It seems to us that the publishers have done most wisely in reproducing Adams' translation which was originally made for the Sydenham Society. Of the erudite notes and comments added by the learned translator we find none omitted, while his version of the original has always called forth the admiration of scholars on account of its elegance and smoothness. The publishers then, we say, have rendered the profession in this country a most signal service in placing before them in such accessible form the works of THE *master* whom all should study.

HANDBOOK OF PRACTICAL MEDICINE. By Prof. Hermann Eichorst. Vol. I. Diseases of the Circulatory and Respiratory Apparatus.

In this work the distinguished Zurich professor plunges *in medias res* without one word of preface or general introduction, such as usually occupy fifty to a hundred pages of every treatise on practice. Fully up with recent advances in pathology and therapeutics, the tendency of the work is to compel resort to every modern expedient in making exact diagnosis. The sphygmograph is evidently in daily use by the author, though the reproductions of his sphygmograms are no better than are usually met with in ordinary text-books. The work in its English dress makes a most important addition to our works on internal medicine, and is probably destined to supplant Niemeyer's, with which one naturally compares it.

DISEASES OF THE SPINAL CORD. By Byrom Bramwell, M. D., F. R. C. P. (Edin.)

For this volume we have nothing but praise. Aside from its merits as a text-book, which are undisputed and conspicuous, it is embellished with fifty-three colored plates and over one hundred wood engravings, all of which former are the actual work of the author who himself drew them from his own preparations, on the

lithograph stone; thereby displaying not only his intense industry as a student but his versatility as an artist. Such didactic work must always command not only respect for an author but popularity for his book, and we doubt if any volume in the series will be more welcome than this. A careful chapter on the anatomy and physiology of the cord precedes a consideration of its diseases. The arrangement of the balance of the book strikes us as most scientific, the second chapter dealing with alterations in function which result from lesions of its different parts. This seems like the natural order in which to discuss its lesions, and not like taking up diseases as a catalogue of pictures presents its contents.

INSANITY AND ITS TREATMENT. By G. Fielding Blandford, M. D., Oxon. Third edition; together with TYPES OF INSANITY, by A. McL. Hamilton, M. D.

This is the third and latest edition of Blandford's well-known work, and is therefore as well chastened by the criticisms which the former editions have provoked as improved by the accumulated experience of the author. Such important topics as conditions necessary for the right operation of mind, a healthy blood flow, insanity in connection with various other acute and chronic disorders, morbid appearances, patients whose insanity is doubtful, insanity without delusions, moral insanity, lucid intervals, are considered with proportionate fullness; while the concluding lecture on the examination of patients is most entertaining and instructive reading for every professional man, whether doctor or attorney.

To the work are appended Hamilton's plates illustrating different types of insanity, previously issued separately by the publishers; which, however, serve admirably as a complement to the text which they follow.

BOOKS RECEIVED.

Through Ulbrich & Kingsley, from D. Appleton & Co., New York:
Medicine of the Future: AUSTIN FLINT.
Diseases of the Nervous System, 6th edition: W. A. HAMMOND.

A SENSIBLE PRECAUTION.—Before undertaking a *post-mortem*, Dr. Crevenger recommends holding the hands over strong liquid ammonia, when the smarting which ensues will reveal all sensitive or abraded places that need a touch of caustic before beginning the examination.—*Weekly Medical Review.*

NOTICE.

In order to make The Medical Press of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

For Sale.—Residence with drug store attached. Will sell drug stock, personal property, and also accounts. Desire to change location on account of ill-health. Address Dr. S. P. Moore, Munnsville, Madison Co., N. Y.

For Sale.—A Beck's Popular Binocular Microscope, with or without lenses, as desired. Address "Microscope," care of The Medical Press.

To Exchange.—Vols. 2 and 5 of *Science.* Address the Editor.

For Sale.—The Medical Library of the late Dr. Macpherson. It contains many valuable English, American and German works. Can be seen at the Medical College Library.

Wanted.—An experienced physician to take a partnership or work for a percentage in a Sanitarium. Address Dr. S. B. Jones, Cattaraugus, N. Y.

Finger-marks and Murder.—Our Paris correspondent forwards particulars of a remarkable trial for murder held recently at Rodez, in the south of France, where a self-accuser was proved to be innocent, and the true criminal detected by medical evidence. Last August a woman, named Melanie Vieu, went to register the death of a child, which she had wrapped up in her apron. The registrar examined the child, as is customary, and observed finger-marks on its throat. The mother then declared that she had strangled her infant. She was sent to prison; but Dr. Desmont, who had been directed to examine the body of the child, stated that it had certainly been strangled, but not by its mother. Her hand was more delicately formed than that of the murderer, which had left its impression on the child's neck. The fingers of the guilty party must have been short and thick, the index finger being unusually short and apparently devoid of a nail, defects which the witness indicated as valuable clues for the discovery of the murderer. Melanie Vieu finally admitted that the murderer was a man called Bonuet, and that she was his servant. The accused was arrested, and his index finger was found to be one centimeter shorter than the average length of that member, and its nail had been desttroyed by accident or disease. Bonuet was sentenced to six years imprisonment.—*British Medical Journal.*

Oesophageal Stricture.—At the Kopenhagen Medical Congress Hjort reported a most interesting case of a patient of fourteen who suffered from stricture of the œsophagus, the result of swallowing caustic alkali. The lesion being too low for combined internal and external œsophagotomy, he made a gastrostomy *a deux temps.* Eight weeks after he was able to introduce a conical sound from below, through the gastric fistula, and engage its point in the stricture above. This was made the negative pole for the electrolytic current, while the positive was applied by a sponge to the neck. After several sittings the sound passed the stricture. Within a fortnight a No. 25 sound could be passed either from below or from above. Later the opening in the stomach was closed, and the patient restored to apparently the best of health.—*Centrlblt. f. Chir. 1886: No. 5.*

At a recent meeting of the French Academy, says the correspondent of *Science*, M. Bouchard read an interesting paper on the toxicity of urine during sleep and during waking hours. At the close of day this liquid is rather inoffensive; but as sleep comes on it grows more and more toxic; eight hours after waking it is the most toxic possible. The symtoms of urine poisoning are different with night and day urine. In the second case, the symptoms are similar to those brought on by narcotics; in the first, they resemble those provoked by convulsing poisons. Upon the whole, then, day urine tends to bring on sleep, and night urine to awaken the sleeper. Professor Bouchard's paper is a very important and interesting one, and we have no doubt of his obtaining striking results by continuance of his experiments.

Gas-forming bacteria have been discovered by Prof. Miller: from the amount written about microbes during the last few years we have long suspected that some such organism was at work.

Just the Place.—A light-minded lay contemporary suggests as a suitable locality for hay-fever patients, Mount Catarrhdin.—*Boston Medical and Surgical Journal.*

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CONCERNING CYSTIC DEGENERATION OF THE KIDNEY:

Its Operative Treatment, with Report of a Successful Nephrectomy.

By Roswell Park, A. M., M. D.
Prof. of Surgery in the Med. Dept., Univ. of Buffalo; Surgeon to the Buffalo General Hospital.

Cystic or fibro-cystic degeneration or transformation of the kidney may be congenital or acquired. It may be entirely limited to one kidney or may involve both. If congenital it is not infrequently accompanied by lesions in other organs or by anatomical vices or variations in conformation (Virchow); and it is said that children of the same mother are liable to be similarly affected (Brückner). When the congenital form develops rapidly, it sometimes leads to premature birth, or it may constitute an insuperable obstacle to a natural delivery, even necesssitating evisceration.

Dermoid cysts in the renal structure are of extreme rarity, Paget having reported the only case which the writer's search has revealed. Next rarest, in this country, are echinococcus cysts, with which at present there is no concern. Next commonest are the hæmorrhagic,—similar to those which form after hæmmorrhage in the brain, and those which are the result of (senile) atrophic changes. But by far the commonest are those whose origin is described under the designation retention cysts, resulting from occlusion and dilatation of the tubuli uriniferi or of the Malpighian bodies.

In adult life a solitary cyst may develop quietly, attaining the size of one's head, and causing only mechanical disturbance; in the female such a cyst is likely to be mistaken for ovarian. The fluid contents of such a cyst, while usually clear, may be greenish; less

frequently they are colloid, while they may even contain concretions. The exact pathology of these tumors is somewhat uncertain; still it is most probable that they are retention cysts.

But it is more especially with the congenital form that I wish here to deal. Such cystic kidneys attain, sometimes, a size larger than the fœtal head. In these cases the transformation is usually into numerous or innumerable cysts of various sizes, down to the minutest visible under a loup. Many of these, doubtless, are formed by fusion. Between these there is more or less fibrous or connective tissue, or parenchyma in which urinary tubules may yet be made out, so that when cut the mass may resemble a section through a bunch of grapes. Sometimes the entire kidney is involved, sometimes the new formations occupy one or more points of vantage whence they are seen to be encroaching on the remainder of the still functionating kidney.

In all probability these cysts represent occluded and dilated urinary tubules and Malprighian corpuscles. Moreover, it not infrequently happens that the fluid found in them contains albumen, cystine and uric acid or calcium oxalate crystals. This is less likely to occur if the cystic changes have begun early in the fœtal life of the kidney, or before it has any particular renal identity. These urinary constituents are by no means necessarily present. This—if other evidence failed—is conspicuously proved by the examination of fluid withdrawn by the aspirator in the case which I give below. This I submitted to my colleague, Prof. Witthaus, for examination, withholding all information—even as to sex of the patient—save that it came from an abdominal tumor. He kindly furnished me the following report:

"I find that the liquid which you left me for examination does not contain uric acid, nor any very readily detectable amount of urea; on the other hand, it contains paralbumen in considerable quantity, and a pecular modification of hæmatin which is stated by MacMunn to be peculiar to ovarian and parovarian cysts. From all characters of the liquid I should say that it came from a cyst which does not communicate with the pelvis of the kidney. All the microscopic and chemical characters of the liquid are those of the fluid of an ovarian cyst. There are, however, no cholesterine crystals, which are usually, though not always, present."

"Microscopically I also found cells which could not be distinguished from the Drysdale cells. In endeavoring to reconcile these

chemical and clinical facts, I recalled a statement of Esmarch's to the effect that paralbumen has been found in the fluid of renal and hydronephrotic cysts; also, the known fact that the Drysdale cell has been found in various intra-abdominal cysts. Events proved the accuracy of Prof. Witthaus' opinion that the cyst from which the fluid came was in no communication with the renal pelvis.

The occlusion leading to dilatation which this view presupposes is considered by Virchow to be the result of inflammation during fœtal life,—which he aptly terms embryonal nephritis,—and which has caused atresia of the papillæ; while Koster regards the whole process as a defect in development. In the case given below the former view must be held, since the kidney pelvis was open.

In such cases as these the renal capsule is easily separable, while the distinction between cortex and the pyramids is lost. A combination of hydronephrosis with the cystic degeneration is occasionally noted. The fact that, in the development of the organ, the urinary tubules and the pelvis develope separately will explain why this coincidence is not oftener met with. It is furthermore of pathological, if not of clinical interest, to remember that instead of enlargement with cystic degeneration there is sometimes atrophy. Thus Ebstein reports a case in which only a miniature collection of cysts remained as relics of the fœtal kidneys.

When now we come to a consideration of the treatment of these cases it is obvious that but one means can avail, viz., the knife. Nothing can be expected of medicinal therapeutics. For this particular lesion the kidney has been removed, including my own case, sixteen times, with nine recoveries; in all but one case removal was by abdominal section. Of the seven fatal cases two died of peritonitis, and one each of shock, pulmonary infarct, secondary hæmorrhage, septicæmia and pyæmia. In none of these cases was the patient as young as in mine.

As a contribution to the surgery of the kidney I desire to put upon record in this place the following case, the main features of which I reported at the last meeting of the American Surgical Association.

R., born October 4, 1883, of healthy parents, appeared at birth and during his earliest months perfectly well. During the ensuing

winter his nurse noticed an enlargement on the right side of the child's abdomen. Later, the attention of the family attendant, Dr. M. B. Folwell, was called to the fact. It steadily increased without corresponding impairment of health, and in spite of treatment. In June, 1883, Drs. E. M. Moore and Whitbeck, of Rochester, were consulted. The general conclusion arrived at was a lesion of the right kidney. At this time the urine was alkaline.

July 31, 1885, I first saw the child, it being then in apparent good health. The urine was alkaline from volatile alkali. It was stated that there was occasional dysuria. Under the microscope there were to be found only numerous crystals of triple phosphates. There was a history of steady enlargement of the growth. Dr. Folwell giving an anæsthetic, I first examined the external genitals; finding adherent prepuce, I released the adhesions with a probe. I next carefully sounded the bladder, but could find no calculus. On examining the abdomen I found a firm, resistant tumor, about the size and shape of a fœtal head at term, accupying the right half of the abdominal cavity. It seemed unquestionably an enlarged kidney. Introducing an aspirator needle I drew off 15 c. c. of a brownish liquid which was odorless, this amount being all that would flow from the puncture.

This liquid was submitted to searching examination as mentioned above, with results that were of but little aid in making a diagnosis, though of no small physiological interest. After careful consideration of the positive and negative evidence I was convinced that we had here to do with a fibro-cystic kidney, probably of congenital origin.

September 5. Drs. Folwell, Mann and myself again anæsthetized and carefully explored. By aspiration we got again a small quantity of fluid similar to that first obtained. In the five weeks intervening since previous aspiration the tumor had notably enlarged and become less movable; while the general health of the little patient seemed deteriorating. The tumor was now so protuberant that he was actually wearing an abdominal suspensory, slung from the shoulders, in which he supported most of its weight.

Operation was proposed and consented to. The patient was removed to the Gates Laparotomy Pavilion in connection with the

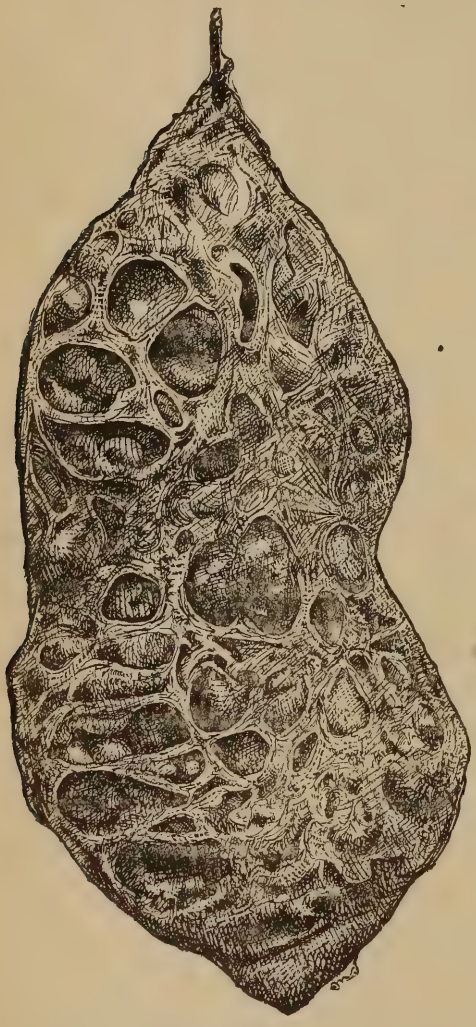
Buffalo General Hospital, where, indeed, he was the first patient admitted. He had thus the advantage of new and clean apartments.

Operation, September 15, 1885. Present: Drs. Rochester, Mann, Phelps, Hopkins, Folwell, who gave the anæsthetic, and the house physician and trained nurses. Chloroform (with amyl nitrite one per cent.) was given till the operation was half completed, when ether was substituted. No spray was used, but the strictest antiseptic details were observed in every other respect. Incision in right linea semilunaris, its middle opposite the umbilicus. On opening the peritoneum the first object to meet the eye was the appendix vermiformis, which lay stretched out over the surface of the tumor, almost at right angles to the line of incision, so far had it been crowded away from its proper locality. The tumor was, of course, retro-peritoneal, but occupied the entire right half of the abdomen; the cæcum and ascending colon were just to the left of the middle line. Exploration with the finger and sound revealed only the most trifling adhesions in the peritoneal cavity. A small trocar passed into the interior of the tumor failed to remove more than a spoonful of fluid. The abdominal incision was then extended till it was thirteen centimetres long, and the peritoneum covering the growth incised. With but little difficulty this was separated all around it till the tumor shelled out from its serous covering, and lay loose save for its pedicle. Two large veins being quite conspicuous in the pedicle, they were first tied separately with catgut, then the whole was tightly seized with a pile clamp, tied in halves with stout silk, the tumor cut off and its base seared with the thermocautery. For the sake of safety, the whole was then once more enclosed in a catgut ligature, after which it was dropped.

Except that which was contained in the tumor, not more than 15 c. c. of blood were lost during the entire operation. After a careful toilet the abdomen was closed by numerous silk sutures. The entire procedure, including dressing, lasted forty-five minutes. Shock was comparatively slight.

Convalescence was marked by only one incident worth notice. The second evening his temperature began to rise; at 6 P. M. it was 103°, at 10 P. M. 104°, at 11 P. M. 104.7°, at 4 A. M. nearly 106°, in

spite of half-hourly doses of tinct. aconite root. At 4 A. M., when his temperature was so nearly 106°, I ordered three minims of aconite tincture and five minims of tincture of digitalis hypodermically. In *two hours* his temperature had *fallen more than six degrees.* This was a happy turning of a crisis which seriously menaced his life.



In due time chloroform was given for the removal of the stitches, and on the twelfth day he was removed to his home.

The tumor was, as I had supposed, a fibro-cystic degeneration of the kidney; the cystic element largely predominating. In the neighborhood of the renal pelvis a very thin portion of true kidney structure could still be distinguished. Immediately after removal and before section, it weighed very nearly *four pounds*, lacking only a fraction of an ounce. On the same day I made a nearly complete section of it and photographed it. The accompanying illustration is a photo-reproduction from a drawing kindly made by Dr. Matzinger from one of my own photographs, and gives a perfectly accurate representation of the specimen, which is itself the most typical of the kind I have ever seen.

The function of this kidney seemed to have been so gradually transferred to the other that at no time after the operation was there the slightest disturbance in excretion or voidance of the urine.

Nephrectomies are not yet so common but that every case possesses an interest of its own. In this case the points of interest seem to me, the establishment of a correct diagnosis, the complete degeneration of one kidney and the apparent immunity of the

other, the total assumption of function by the healthy one without the slightest disturbance, the method of operating by abdominal section, and lastly the success of the whole procedure in so young a patent. Among all of the two hundred and fifty nephrectomies on record I can find account of but three patients who were of ages near that of mine. These are as follows:

Jessop, of Leeds, operated on a child aged two and one-quarter years, for encephaloid kidney. Lumbar incision. Patient recovered from operation and died nine nonths later from recidive. (*Lancet*, Am. ed., 1877, p. 480.)

Kocher, of Berne, reported a patient aged two and a half years, operated on for adeno-sarcoma. Death on the second day. Abdominal incision. (*Deutsche Zeitschrift f. Chir.*, ix.)

Czerny operated on an infant of eleven months for adenoma of left kidney. Death in sixty hours. Abdominal incision. (*Deutsche med. Wochenschrift*, 1881, 31.)

It would thus appear that mine was the youngest patient who has ever survived nephrectomy, he being twenty-three months old when operated on. The only other observation I have to make in connection with the case is that the abdominal incision was made not from choice, but from necessity, the tumor being altogether too large for extraction from so small an abdomen in any other way.

It is now ten months since the operation, and the little patient is the picture of health.

A DEFINITION OF GOUT.—Dr. Milner Fothergill gives the following succinct account of the pathology of gout (*Medical Record*, November, 1885): "When kidneys first appear in the animal kingdom, the form of urinary secretion is uric acid. Uric acid belongs to animals with a three-chambered heart and a solid urine (reptiles and birds). The mammalia possess a four-chambered heart and fluid urine, the form of urinary secretion being the soluble urea. When the human liver becomes depraved or degraded, it has a tendency to form primitive urinary products. To the question, 'What is gout?' the answer is: 'Gout is hepatic reversion, when primitive urine is formed by a mammalian liver.'"

SOMNAMBULISM.

BY J. W. KEENE, M. D.
Lecturer on Obstetrics, Med. Dept., Univ. of Buffalo.

[Read before the Buffalo Medical Club.]

At a recent meeting of this Club an essay of unusual interest was presented on the subject of hypnotism. It is not the purpose of my paper to retrace the ground covered by the one I have mentioned, nor necessarily to attack any position assumed by its writer; but rather to present some considerations of another of the interesting states supervening between consciousness and unconsciousness —a sort of Hibernian *ex post facto* introduction to the paper you have already listened to.

It is as well, perhaps, at the outset, to set up our guide-posts and fix our limits. Sleep and ordinary or extraordinary dreams even attended with somniloquy will be mentioned only incidentally, on the one hand; while, on the other, artificial somnambulism or hypnotism—which might legitimately enough be considered under the title chosen—will not be discussed for the reason that we have so recently heard an admirable paper upon that subject; and trance or ecstacy so nearly allied to these states may form the subject of a future paper if a reception sufficiently gracious be accorded to the present effort. Somnambulism, then,—distinct from dreams on the one hand, from hypnotism and trance on the other,—is the subject to which we will endeavor to confine our attention. And in whatever discussion may be evoked it is hoped that these limits will be observed, however strong the temptation to stray into adjoining domains of the landscape of the mind.

It is important to bear in mind that there are degrees of sleep; that the body does not fall asleep or awake all at once. There is a gradation in both directions—a twilight which precedes and merges into the night of deep, unconscious sleep, and another twilight which ushers in the dawn of awaking. One after another the senses fall asleep—one after another they awake and not necessarily in the same or in reversed order. The spinal sensory centers may sleep and the spinal cord be awake. Moreover, sleep is a fluctuating state. Some parts may be deeply insensible, while others are only

partly so; and these in their relations to each other are constantly varying. Let us add to these postulates that there is a tendency of ideas to come together and form some sort of imagery in the mind—a tendency which may be likened to the so-called nascent state of chemical elements. The resultant combination—the mental image thus formed—even in a state of consciousness, may be incongruous, grotesque and absurd, unless the separate ideas are arranged in order by the will. This is seen in the state of reverie in which the almost unconscious sequence of ideas often forms a succession of mental images quite as fantastic as those of dreams. In somnambulism, certain centers, ganglia or areas of the brain retain their functional activity, while others are more or less deeply asleep; or, in the language of Heidenhain, the ganglion cells of certain regions of the cerebral cortex are inhibited. Somnambulism, then, is an acted dream. As in dreams, we have presented the phenomena attending varying degrees of unconsciousness, the fluctuating activities of the ganglia, and the grouping of ideas in a succession of mental images usually more or less incongruous but sometimes harmonious and natural. This dream on which the attention is concentrated closes the door of the consciousness to all sensorial impressions except those in immediate relation to itself. And it is a physiological law that excessive activity of one function induces a corresponding depression in another or others. The converse may easily hold good—that the inhibition of the normal activity of certain ganglia may admit of, predispose to, and perhaps render inevitable excessive action of other ganglia. This will serve our purpose equally well whatever views we hold in regard to inhibition. Whether we should regard inhibition as the merely normal, passive condition of ganglion cells acting like the balance-wheel of a watch or the fly-wheel of an engine, or whether we look upon it as something more than this—something whose power is exerted only when undue activity exists in some other part of the machine—like the governor of an engine—is not yet settled.

The discussion of this vexed question is not consonant with our purpose nor pertinent to it. The phenomena attending somnambulism and its kindred state, hypnosis or mesmerism, seem capable of explanation upon these principles without invoking the aid of a spinal

cord endowed with powers of ideation and volition (the theory of Hammond*), or attributing them to imposture as Cullen and Casper† have done, or to demoniacal possession as in the middle ages. These principles are essentially those enunciated by Heidenhain, Maudsley, Hack Tuke and others. Indeed, the old explanation of mental aberration in general, formulated by Dr. Henry Monro is but little else than another way of expressing Heidenhain's theory of inhibition. Dr. Monro held that the cerebral masses having lost their static equilibrium, exhibit in their functional activity two opposite conditions, positive and negative, viz., irritable excess of nervous action and partial paralysis. The theory that the phenomena of this state are due to reflex action alone is not tenable except in certain instances. There are cases, no doubt, in which ideation is not excited at all—in which there is no dream—and the acts are accordingly sensori-motor or purely excito-motor. In these cases only is the comparison of a somnambulist to a frog deprived of his cerebral lobes applicable.

The acts of the somnambulist are almost always examples of involuntary ideo-motor action. The theory of discharge or liberation of nervous energy announced by Spencer, and by Dr. Jackson made to explain the phenomena of epilepsy and other mental disorders, has in it something of truth. The liberation of energy in one center and the stability of another, which, freed from control by this discharge of energy may become intensely active, correspond very nearly to the positive and negative conditions of Monro and are readily reconcilable to the theory of inhibition. According to Tuke, the induction of hypnotism as practised by Braid "owes its success to the exhaustion of a part of the cerebral cortex, while others unexhausted respond all the more acutely to stimulation." The vascular condition of the brain in this condition is a subject of interesting inquiry, but one which is likely to baffle the inquirer; as is the other kindred question, whether the primary disturbance is vaso-motory or cortical.

Touching these points Hack Tuke says:‡ "There is no reason why this disturbance should always have the same origin. I take

* Sleep and its Derangements, p. 218.
† Forensic Medicine, Syd. Soc., 1861.
‡ Sleep-walking and Hypnotism, p. 7.

it that it sometimes arises from the vaso-motor center of the encephalon, or from localized vascular disorder, and that at other times it originates in the cerebral tissue itself, the result in any case being an irregular distribution of blood."

However much and however accurately the man of science may theorize concerning this interesting condition, the performance of the sleep-walker must continue to inspire us with a certain feeling of awe. We see him automatically perform a series of accustomed acts; or accomplish feats and run risks which his waking judgment and courage would forbid him to undertake; or achieve some intellectual task which his conscious mind had proved unable to compass.

"In the unconscious yet exquisitely co-ordinated acts he performs, in the vivid wakefulness to some impressions, and the death-like indifference to all others we witness," says Tuke, "a marvelous phenomenon." Aristotle has left a record of his observations in this direction. "Some are moved," said he, "while they sleep, and perform many things that pertain to wakefulness, though not without a certain phantasm and a certain sense, for a dream is after a certain manner a sensible perception." Hipprocrates says, "I have known many persons during sleep moaning and crying out * * and others rising up, fleeing out of doors, and deprived of their reason until they awake, and afterward becoming well and rational as before, although they may be pale and weak."

Compare the misty, metaphysical theorizing of the philosopher with the physician's simple and direct statement of what he had observed.

Carpenter (Phys., 618), in speaking of the phenomena of this state says: "They occur in a state of consciousness so far distinct from the ordinary waking condition as not to be connected with it by the ordinary link of memory; and although the course of thought in somnambulism usually manifests the directing influence of previous habits, and the knowledge of persons and things possessed during the waking state may be readily brought before the mind, yet nothing which occurs during the state of somnambulism is ever retraced spontaneously, or can be brought back by an act of recollection." He admits that impressions may remain which may give rise to subsequent discomfort but of whose origin the individual is entirely

unconscious. The fact is well established that the somnambulist in one attack often recalls the acts of previous attacks. This, however, is not necessarily an act of memory. Yet many of the examples quoted by recent writers indicate conclusively that memory is not always wholly in obeyance.

Bertrand relates an interesting case in which memory seems to have remained active. A young man in his sleep frequently wandered into the streets and even into the country, walking on stilts to cross a rapid stream. If he awoke after crossing it he dared not recross it. Awaking in darkness he was enabled to find his way home from the fact that he remembered all that had occurred in his dream.

A case is mentioned in which the person recollected all that transpired if he awoke during the dream, but not otherwise.

Writers agree that the will is inactive. The conviction forces itself upon the writer that more thorough investigation of the subject may prove this view to be fallacious. That the will as an intelligent controller of the course of reasoning or of action remains passive or nearly so, must necessarily be granted. But may we not have at times a partial exercise of volition? Is it not possible that this faculty follows the general law of variability, of gradation, of fluctuation, so that exceptionally the glimmerings of its activity may be manifest in the actions of the somnambulist? Or is it necessary in the very nature of this condition to regard volition as wholly inhibited? Is it not as reasonable to attribute certain of the acts of the somnambulist to the perversion rather than to the abolition of the will, as it is those of a person intoxicated or insane?

The reasoning faculty is often exalted. A student solves a problem which had baffled his waking powers; an author composes and commits to writing poetry or prose upon the subject which occupies his thoughts; or an orator makes a speech appropriate to the occasion imaged in his dream. Yet in these wonderful intellectual operations it is frequently observed that they are defective, in that they take into account only those considerations which engross the attention and are in relation to the dream enacted; while others which ought to modify the conclusion are ignored; and this, too, when the conclusion is contrary to ordinary experience. In other

words, the mind acts as the senses do. The somnambulist sees nothing except what is in relation to his dream; he hears nothing unless his dream suggests sound; his very sensation is obtunded to all external impressions. So the intellect, acting only on the considerations presented by the dream, disregards all others.

The case of the boy who proved the 47th Prob. of Euclid, Book I. in his sleep is familiar to all. That it was not a mere dream is evinced by the fact that he was observed to follow with his finger an imaginary figure upon the wall of his chamber. It is significant, too, that in the morning he remembered it so perfectly as to be able to write out the proof. It was the *dream* that he remembered; his *acts* of the night, prompted by the dream, had no place in his recollection.

Tuke relates a scarcely less wonderful case: A girl very anxious to profit by the educational privileges afforded by her mother at much personal sacrifice, was surprised to find, morning after morning, on taking her book to study, that she already knew the lesson. She was at last found by her mother, at night, seated at the window in her night dress, engaged in earnest but unconscious study.*

Another interesting phase of the subject under discussion is its relation to nervous diseases. Trousseau says that every nocturnal accident ought to make us think of epilepsy. While in its severest forms somnambulism approaches perilously near to this disease, yet, in its simpler manifestations, as so often seen in children, it can hardly be deemed more pathological than dreams. Epilepsy has certainly followed somnambulism, and no doubt as a result of the same cause,—a more advanced stage—a more profound manifestation of the nervous disorder. Yet contrary to what we might expect, in hospitals devoted to epileptics, but few instances of somnambulism are observed. And even among idiots and imbeciles, so many of whom are epileptics, somnambulism is by no means common. Doubtless this is due to the fact that in their abnormally constituted brains the dream is not sufficiently vivid to excite ideomotor activity. Their inability to concentrate their attention with sufficient intensity and persistence upon any one point renders it

*Tuke, Sleep-walking and Hyp., p. 29.

of the prior in the night armed with a large knife, went straight to the bed—to which the prior had not yet retired—and inflicted three stabs, penetrating the bed-clothes.

A case of attempted suicide in the somnambulic state is recorded by Mesnet.* A Mme. X. took the string of her apron, made a loop in one end, mounted a chair and fastened the other end to the top of the window. She then engaged in devotion for a few moments, tried the strength of the cord, mounted a stool and suspended herself. M. Mesnet allowed her to hang as long as he dared and then cut the cord.

Serious and even fatal accidents may happen to the somnambulist notwithstanding the popular belief to the contrary. A boy falls from a third story window and injures his hip, but is lucky enough to sustain no further harm. A lady falls down the kitchen stairs sustaining a serious scalp wound. Somnambulists often find themselves bruised or injured in the morning after indulging in their nocturnal perambulations.

A wonderful exaltation of the muscular sense is exhibited even in the ordinary acts of somnambulists. A few of the numberless recorded instances are here presented.

Bertrand gives an interesting account of a young ecclesiastic of Bordeaux, who was a somnambulist. He was observed to rise at night and write sermons. When he had finished a page he would read and correct it. An opaque object placed before his eyes did not prevent him from writing. The substitution of other sheets of paper unlike his own in size was noticed by him. A sheet like his own he would use and make his corrections on the places corresponding to those on his own paper. This young man performed many astonishing acts. One of the most remarkable was the composition of a piece of music. He used a cane as a ruler. The clef, the flats and the sharps were in their proper places. The notes were first made as circles, and those requiring it were blackened with ink. The words were written below. At first they did not come under their proper notes; this he soon observed and erasing what he had written rewrote it correctly.

Once, apparently dreaming that he saw a child fall into the

* Archives Générales de Médicine, February, 1860.

water, he threw himself upon his bed and imitated the movements of swimming. Having thus thrown a portion of the bed-clothes into a sort of a bundle he seized it in one hand as though it were a child, continuing to swim with the other. He finally placed the bundle in a place of safety, rose shivering, with his teeth chattering, remarked that he was frozen and would die of cold and asked the bystanders for brandy. Water was given him instead; he detected the difference and demanded brandy, which being procured, he drank with much satisfaction, returned to bed without awaking, and slept tranquilly the rest of the night.*

Another instance illustrating the exaltation of the muscular sense—an example of reflex action of the cerebral hemispheres—is related by M. Mesnet, of a French sergeant whose head was injured by a ball at Sedan in the Franco-German war. He wrote a few words illegibly when a metallic plate was held between his eyes and the paper, but soon stopped although not manifesting any annoyance. When the plate was removed he went on completing the unfinished line. Water being substituted for ink, he wrote as long as the pen made any mark and then wiped the pen and tried again. He began with ten sheets of paper, which were removed one after another till on the fifth sheet only his name was written. From this sheet he then corrected all he had written, adding the corrections so that they answered not only to the word corrected, but to the corresponding spot on the sheet where it occurred.

The condition of the special senses, especially vision and hearing, is not yet accurately determined. The case just cited indicates that vision is sometimes present to a partial degree at least. The eyes are usually open and staring, but blind to all else, see only the images of the dream. Sometimes vision seems to be exalted, so that the person sees objects with an amount of light equivalent to darkness under normal conditions. Yet much aid is afforded by the exalted tactile sense, which indeed may replace vision entirely. Hammond speaks of a lady who, on one occasion, went into a dark closet and arranged in order the contents of a trunk into which clothing of various kinds had been put unsorted. She classified them without a single mistake.

* Hammond: Sleep and its Derangements, 196–197.

A young lady mentioned by Bertrand wrote letters in the dark. The presence of light, even moonlight, rendered her unable to write.

Mme. X., already mentioned, wrote letters in a room so dark that her physician could not distinguish objects in it. That she depended on her vision is probable from the fact that she ceased to write and seemed distressed when an opaque object was placed between her eyes and the paper.

That often the somnambulist depends only upon the mental image is proved by the case of the French sergeant already cited, and still further indicated by the fact that if his sheet was moved his corrections were made at points corresponding to its former position. He was, therefore, correcting the mental image; and only when that corresponded to the sheet before him were his corrections properly placed. The hearing is usually annulled. This sergeant failed to perceive the loudest sounds. Still instances are numerous in which questions are correctly answered; and in simple cases the person awakes when spoken to sharply. One of Dr. Hammond's cases was not aroused by the noise made by striking two books forcibly together. In this case smell and taste seemed to be annulled. A sulphur match burned under her nose excited not even reflex irritation. To lemon juice and quinine introduced into her mouth she was apparently equally indifferent.

M. Mesnet's soldier discovered no difference between wine, vinegar and assafœtida. In his case, too, while exhibiting no sensibility to pain, his tactile sense was exceedingly acute and was, as Mesnet says, "the only sense in addition to the muscular sense which remained to place him in relation to the external world."

In Hammond's case just referred to, general sensationwas abolished. Pricking with a pin, pinching her or pulling her hair evoked no sign of sensation. Her conjunctivæ were touched with a lead pencil without eliciting response. Tickling the soles of her feet caused her to draw them away. The spinal cord, therefore, was active.

The power of co-ordination and motion always remains intact or intensified. A boy gets out of bed, goes to a cupboard, selects one of his toys and deliberately presents it to a member of the family. Another mounts his rocking horse and indulges in a nocturnal canter. A gentleman saddles his horse and mounts him for a ride.

He plays upon musical instruments and imitates the motions of a billiard player. Another—a servant—lays the table and waits upon an imaginary master; he then warms a bed, locks up the house and retires again.

It is often exceedingly difficult to arouse the somnambulist. One will remain insensible to the loudest noises or the roughest usage, but will awake at once on blowing gently into his open eyes. Another awakes readily when the soles of his feet are tickled, but resists all sounds—even a trumpet blown in his ears. One whose eyes are customarily closed, awakes when they are forcibly opened. Sometimes when strongly shaken the somnambulist will arouse, answer questions, sign his name and fall asleep again if left alone.

The attacks are not infrequently periodical, particularly in females. One case is mentioned in which they appeared every day except Tuesdays.

In regard to treatment there is little to be said, except that somnambulism should be recognized as a disease or, at least, a symptom of disease, and treated according to causation, when that can be ascertained. Efforts to break up the habit should be made. Punishment, drenching with water, etc., are contra-indicated. Dr. Hammond extols the bromide of potassium. Iron, quinine, strychnia and phosphorus may be exhibited with advantage, according to special indications. These remedies, together with proper hygiene, both physical and mental, seldom fail to benefit the patient if not to effect a cure.

MR. SUTTON in his article "Evolution in Pathology," says: Inflammation, as read zoologically, can be likened to a battle. The leucocytes are the defending army, the roads and lines of communication are the blood-vessels. When there is an invasion of bacilli, bacteria, etc., the leucocytes march to the attack, and when the slaughter is very great "the tissues become burdened by the dead bodies of the soldiers in the form of pus." Laudable pus, we presume, represents the dead bodies of officers and others who have distinguished themselves in the conflict.

INTRODUCTION OF FOREIGN BODY INTO THE BRAIN WITH SUICIDAL INTENT.

BY JAMES G. HUNT, M. D.
Utica, N. Y.

[Read before the Utica Medical Library Association.]

On the morning of the 19th of last June I was called to see John Nenninger, a German, residing at No. 123 Liberty St., in this city. On my arrival at his house, I found Mr. Nenninger sitting in a chair as unconcerned as could be. I asked him what the trouble was, but he rather hesitated at first about telling me, and in fact, would not do so unless I would promise him I would not tell anyone what he had done. Finally he took me into the front room apart from the family and told me that he had attempted to commit suicide the night before by driving a nail into his brain. Then he leaned forward and placed his finger upon the head of a nail imbedded in the skull about the juncture of the coronal and sagittal sutures.

I went back to my office and procured a pair of incisor tooth forceps and returned to the house. Placing him in a reclining position, with my student to steady his head, with considerable difficulty I succeeded in grasping the head of the nail. After using extreme force, I managed to start the nail, which was carefully drawn out in the line of penetration in order to avoid injuring any more of the brain tissue than was necessary.

The nail by actual measurement was two and a half inches long, and was what is known as an eight-penny nail. Not more than two or three drops of blood followed its removal. I sponged the wound carefully and inserted in the "nail hole" to the depth of about one and a half inches a little twisted oakum saturated with a weak solution of carbolic acid. This tent was changed quite a number of times daily. A pad of cloth wet with distilled extract of witch hazel was kept over the oakum. I put him on fld. extract of ergot gtts. xv. every four hours and gave him a cathartic which operated thoroughly the next morning. As he had been suffering, previous to the attempt at suicide, with dyspepsia I also put him on oxalate of cerium. His temperature did not rise above $99\frac{1}{2}^{\circ}$ at any time

and his pulse not over 89. I continued this treatment from day to day and the wound gradually closed, having been open fifteen days. The wound discharged but very little pus, probably not over a drachm and a half during the entire period of suppuration. He complained of no pain during this time, and upon inquiry he said that he felt as well as ever in regard to his head. He still, however, continued to have trouble with his stomach, suffering periods of nausea which resisted treatment.

I had been acquainted with Mr. Nenninger over twenty years, and regarded him as a peculiar character. He was self-willed and morose at times, yet possessed more than ordinary education. He had been very intemperate in former years, but had used stimulants more moderately of late.

After gaining his confidence, I persuaded him to tell me what induced him to commit such a rash act. He told me that he had been suffering severe pain in the stomach and head for months and had passed sleepless nights for nearly as long.

One day after reading in a German paper an account of a man putting an end to himself by driving a nail into his brain, he resolved to kill himself in the same way. He procured a hammer and the nail above described and succeeded, as he told me, in driving it completely home with six blows. He told me he expected to die instantly, believing the result of his work would be as fatal as that he had read of. After hiding the hammer, he went to bed, fell asleep and did not awake till 4:30 A. M., having slept about three and a half hours after the nail had entered his brain. He told me that on awaking he felt greatly disappointed, having expected to wake up in another world.

I arrived at a pretty definite conclusion before death as to the course of the nail. I came to my conclusions in the following way: By taking exact measurements and having the nail, I was enabled with the aid of a life-sized pictorial manikin of the brain and a skull, to locate the very course of penetration into the brain. These conclusions led me to believe that the nail, having entered at the juncture of the coronal sagittal sutures, had passed to the right of the falx cerebri and had entered the corpus callosum a quarter of an inch.

From about the 4th to the 20th of July he enjoyed apparently good health, but about the 20th his nausea became worse and he passed into a comatose state in which he died, July 30th, 1885. Urinary analysis had revealed nothing abnormal.

Dr. H. S. Quinn had seen the case with me in consultation. The autopsy was held twenty-four hours after death by Dr. Wm. M. Gibson and myself. Body well nourished, considerable fat under the skin; rigor mortis slight. Examination of the brain, first: Bones of the skull of ordinary thickness, calvarium rigidly adherent to the dura mater throughout, requiring dissection to free it; adhesions most extensive and firmest in the region of the fracture; dura mater seat of chronic pachymeningitis, adherent to the pia mater over nearly the entire covex surface of the cerebrum. On freeing the brain from the membrane a little pus oozed from the line of penetration; a large extravasation of blood was found on the left anterior central convolution. The pia mater was found opaque and thickened at the base, showing chronic basilar meningitis; punctate hemorrhages were found in the right hemisphere under the anterior and posterior central convolution.

It was found that the nail had passed just to the right of the falx cerebri, and had entered into the corpus callosum about a sixth of an inch, and had not in any way injured any other part of the brain. The organs of the thorax were normal. The liver was found in the enlarged stage of cirrhosis. The stomach and small intestines in a state of chronic catarrh; the right kidney contained several small abscesses in the center. Other organs normal.

DR. PALMER, of Batavia, sends us a brief note concerning a patient, whom he had long known as an habitual drinker, who complained one afternoon of abdominal pain, for which he prescribed, and whom he found dying at ten o'clock the same evening.

On autopsy it was discovered that there had been severe enteritis with ulceration; several ulcers, being of sizes from a millet seed up to that of a split pea, had given way, and as a result there were numerous perforations with escape of fœcal matter and speedy collapse and death.

Such a number of perforations within so short a length of intestine makes the case quite peculiar.

CONCERNING BATTERIES AND THEIR USE BY PHYSICIASN.

BY ELI H. LONG, M. D.,
Lecturer on Special Therapeutics, Med. Dept., University of Buffalo.

[Read before the Physicians' Club.]

We are gradually realizing that the whole of electro-therapeutics does not consist of the use of a machine that will hum. To be successful, both the galvanic and the faradic currents should be studied and employed in suitable cases respectively.

The forms of batteries in present use are various. The combination mostly used for portable batteries is the Grenét cell, consisting of zinc and carbon plates, in a solution of bichromate of potassium in dilute sulphuric acid. This cell is the one generally used to generate the primary current of the faradic apparatus, and a series of them, known as the Stöhrer battery, is used largely as a portable galvanic battery. In each case the zinc is lifted out of the fluid when not in use. The cell of Smee's battery consists of zinc and platinum in dilute sulphuric acid. This is an expensive combination and it gives an inconstant current, owing to the rapid chemical action. The action in all of these forms is decomposition of the sulphuric acid by the zinc, with the formation of sulphate of zinc and the liberation of hydrogen. Another form of zinc-carbon battery is that in which mercurous sulphate is placed in the bottom of the cell, with the elements immersed in a slightly acidulated water, and separated by a porous diaphragm or other non-conducting substance. This is mentioned by some as a convenient form for portable purposes, the cells being very small. Still another form is the Leclanché cell. Here the carbon is placed in a porous cell, and surrounded by a mixture of coarsely powdered carbon and dioxide of manganese. The zinc is in form of a rod, which, with the porous cell, is placed in a solution of chloride of ammonium. This, by its decomposition, furnishes hydrochloric acid, which is decomposed by the zinc. This cell is used very largely for purposes which call for a constant current of considerable power, as for electric signal-bells and alarms. It also forms a very valuable battery for medical purposes, considered by some to be the best kind of portable galvanic battery. It requires little

attention to keep it in good order, and the cells can be obtained of any size from two ounces capacity upward.

These batteries represent the class known as *single-fluid* batteries, the active fluid being diffused throughout the cell. The *two-fluid* batteries have the two fluids separated, either by their difference of specific gravity, as in the Hill cell, or by a porous cup or diaphragm, as in the Daniell cell.

The Hill cell consists of zinc and copper elements. The latter is immersed in a saturated solution of sulphate of copper in the lower part of the jar, and the former is placed in the upper part of the jar, immersed in water, which becomes a solution of sulphuric acid when the cell is active. The sulphate of copper being decomposed, metallic copper is deposited upon the copper element, and the acid is set free to diffuse through the water. It, in turn, is decomposed by the zinc, with the formation of sulphate of zinc, which the water holds in solution. The difference of specific gravity of the fluids keeps them separated by a well-marked color-line, hence the name "gravity" cell. This combination is used upon telegraphic lines, and is one that is easily kept in order. The Daniell cell consists of the same elements separated by an earthen diaphragm. A modification of this, very highly recommended by Bartholow for stationary purposes, is the Siemens and Halske modification as made for Remak. It consists of interposing paper pulp, in addition to the earthen diaphragm, with a view of increasing the internal resistance. The Grove battery, with zinc in dilute sulphuric acid, and platinum in nitric acid within a porous cup, is one of the most powerful of two-fluid batteries. But it is objectionable because it gives off fumes of hyponitrous acid when in action. The Bunsen combination has carbon in place of the platinum, but offers the same objection.

The two-fluid batteries give a more constant current, and are more easily kept in order than the single-fluid batteries. They have larger cells, and therefore are not suitable for portable purposes, but for a stationary battery the two-fluid cells are to be preferred, for in addition to the advantages just mentioned, they give a current that is less irritating and probably more valuable therapeutically.

Electrical science has given us a few terms which should be understood.

Electro-motive force is the power generated in the battery, and has as its unit the *volt*. This represents the power generated in a Daniell cell; but the whole power of the cell is not available for use. The current in passing encounters a certain amount of resistance, and its strength is thereby diminished. The available *current-strength* or *intensity* is obtained by dividing the *electro-motive force* by the internal and external resistance. The unit of *resistance* is called the *ohm*. It represents the resistance offered by a piece of telegraph wire 100 metres long and of a certain thickness. Accordingly, the unit of intensity, called the *ampère* or *weber*, would represent the power of one volt circulating in a conductor having one ohm of resistance, in the unit of time; or, the power of a Daniell cell traversing 100 metres of certain wire in a second.

The unit of *capacity* is the *farad*. It is the capacity of a condenser which holds one ampère at the potential of one volt.

In illustration of the terms *intensity* and *resistance*, let us compare a quantity and an intensity battery having each ten zinc-carbon cells. The quantity battery has all of the zincs connected, and all of the carbons likewise; so it really forms one large cell, giving a large quantity of electricity, but having the electro-motive force and the resistance, of only one cell; so the current has little tension, and little power to overcome resistance. On the other hand, the intensity battery has the zinc of each cell connected to the carbon of the next, forming ten distinct combinations united. These of course have the electro-motive force, and also the resistance, of ten cells, giving a current of intensity capable of overcoming resistance. Now bring into the circuit of each a loop of platinum wire. The quantity current will heat it to redness, while the intensity current will barely warm it. Why? The former is incapable of overcoming the resistance offered by the platinum loop, therefore its electricity is converted at that point into heat; but the latter, having the power to overcome the resistance, passes without interruption. Apply each current to the tissues of the body, and it is evident that the former will destroy tissue, while the latter will simply irritate. In the quantity battery, large surface of elements is necessary, and

one or two large cells will give as much electricity as a greater number of smaller ones. This is not the case with an intensity battery, for here the size of the cell is unimportant, a series of small cells giving a current of the same intensity as the same number of large ones. We should bear in mind that the several kinds of cells differ in power, according to the intensity of their chemical action. Thus the Daniell cell has an electro-motive force of one volt, the zinc-carbon cell 1.5 volts, the Leclanché 1.3 volts, and the Grove 1.92 volts.

From this we see that twenty zinc-carbon cells would give a current equal to that of thirty Daniell cells, notwithstanding the latter are usually of large size. It follows also that the indiscriminate expression of current strength by the number of cells used, is unreliable; especially so with the zinc-carbon battery, whose current, after attaining its maximum intensity soon after renewal, grows steadily weaker. In practice, before applying the current, it should be tested by the operator upon himself. This is imperative when the application is to be made to the head.

The character of the intensity current is further modified by the degree of internal resistance. When we reflect that thermic or caustic effects are produced by a current, having a minimum of internal resistance, meeting a great degree of external resistance, we can readily see that the more nearly equally the internal and external resistances are balanced, the less disturbance to the tissues will result, and the pleasanter will be the current. It is upon this principle that galvanic batteries for ordinary medical uses are arranged.

No one form of battery can be used for all purposes. For electrolysis, for instance, where the needles are placed near to each other, the resistance presented is not very great, and the internal resistance must be correspondingly small. Therefore the Daniell battery or any of its modifications is not suitable for this purpose; but the Stöhrer or ordinary zinc-carbon battery, having a greater electro-motive force and less internal resistance to diminish its energy, is the one to be used. On the other hand, the current of the latter, when applied for other purposes, is more irritating by virtue of its greater action upon the tissues, while the former gives a pleasanter current. By balancing the resistance, the generation

of heat and chemical action in the tissues is reduced to a minimum.

The external resistance may be regulated, if desired, by means of a rheostat. A water rheostat is a contrivance for bringing a stratum of water or other fluid into the circuit, its thickness being regulated by a movable pole. A wire rhesotat is made of one or more coils of wire through which the current is made to pass. The resistance of wire is directly as its length and inversely as its thickness. Accordingly, very fine wire is used for resistance coils. These are more accurate than the water rheostat, each coil being made to represent a certain number of ohms. There are other apparatuses which modify the current, that are needed to made an electrical outfit complete. Among these are the pole changer and the interrupter.

A battery needs good care in order to be a good servant. It is not to be blamed for giving a poor current, or none at all, when looked at only once in six months. Any oxidation of the points of contact of the connections will interfere with the conduction, to avoid which they should be kept clean and bright. New elements must be supplied when necessary, and especially should the fluid be frequently examined. We have learned to amalgamate the zincs of our zinc-carbon batteries. This is essential because of the impurities of commercial zinc, which may be supposed to form a great number of minute galvanic combinations with the particles of zinc, each having a complete circuit. This being the case, our current would represent but a small part of the chemical action occurring in the cell; but the process of amalgamation gives the zinc a homogeneous surface and the molecular currents are prevented. The process is accomplished either by direct contact of the metallic mercury, or by the presence of a salt of mercury in the battery fluid.

The zincs of a zinc-carbon battery should always be lifted out of the fluid when not in use, to prevent waste of the elements. But this cannot be taken as the rule for the care of all batteries. In the forms just mentioned, the conditions for developing the full strength of current are immediately present when the elements are immersed; therefore they may be removed and replaced at will. Not so with the two-fluid batteries that we use. Here, and also in the Leclanché cell, the active fluid is present only as a result of chemical decom position, and consequently considerable time is required to develop

the full activity of the cell. Therefore, in order to have the current available at any time, the metals must remain in the fluids. In this class of cells much depends upon the proper relations of the fluids, both in regard to density and quantity.

A Hill battery in good condition shows the color-line about midway between the metals; but if the zinc is removed for a time this balance is disturbed and the sulphate of copper, not being decomposed, is apt to diffuse throughout the fluid. The same occurs if the circuit is left open when the battery is not in use. Therefore the current should be allowed to pass constantly in order to keep the battery in ready condition; not a strong current, however, for that would be a needless waste of elements; but in order to reduce chemical action to a minimum, but still enough to maintain the proper relation of the cell elements, a certain amount of resistance must be thrown into the circuit by means of resistance coils. A practical electrician can calculate the amount of resistance needed for a given battery, or the appearance of the cells may be taken as a guide, for when the blue copper solution rises too high the resistance is too light.

The sulphate of zinc solution which accumulates should be occasionally replaced with water.

The induced current is in more general use at the present time than the constant current. From this fact it might be assumed that the apparatus by which it is generated is well understood, and any reference thereto unnecessary. However, I will note a few facts that will bear emphasis.

The current felt when the electrodes of the faradic battery are applied is always an induced current, never the current directly from the battery. This statement as applied to the primary current probably needs some explanation.

It is a law in physics that when a current of electricity passes in near proximity to a circuit of simple wire, a current is induced in the latter, called the secondary current. It is likewise true that if the conducting wire of a battery be arranged in a coil, induction occurs between the turns of the coil. This forms a current which Faraday calls an "extra" current, and it is more intense than the original. This extra current may be and is utilized in the faradic

machine, where it is derived from the primary coil, and forms the so-called primary current. The secondary current is induced in the secondary coil which surrounds the primary. It is the stronger current; for induction, whether between two coils or between the turns of the same coil, always intensifies.

Besides the galvanic and faradic currents, both static electricity and magnetism are well spoken of for some purposes. Bartholow considers the former as more tonic, when generally applied, than the faradic current. He uses the Toepler-Holtz machine. Although the lines of electro-therapeutics still lack definiteness, there are some directions in which we can understand the action, namely: the surgical uses of electricity, for cautery and electrolytic purposes. We know that in one case the tissue is destroyed by heat generated by the current at the point of resistance. In electrolysis the action upon the tissues is for the most part chemical, and the reactions are capable of demonstration. The current decomposes the salts of the tissues into their acids and bases; likewise the water into hydrogen and oxygen. The oxygen and acids appear at the positive pole and the hydrogen and alkalies at the negative. In course of the action the albuminoid elements of the tissues, are coagulated. Given the different elements in a nascent state, and the conditions for their ready recombination, and we can understand the alteration or destruction of tissue.

The two kinds of current (galvanic and faradic) have not been analyzed with very positive results as to their distinct physiological action. However, it is believed that the constant current is more stimulating to the nutritive processes, while the faradic indirectly improves the condition of the part by inducing muscular contraction, which may be considered a form of passive exercise. This is seen in its very successful employment in cases of nervous debility and anæmia, as treated by Dr. Mitchell's method. Absolute rest of body and mind is enforced, good food taken, and the muscles have passive exercise in the contractions induced by general faradization. In addition to this, massage is employed. By these means oxidation is increased without any tax upon the system, beyond that nutritive supply which is natural and beneficial, by compelling activity of the vital processes, which in turn increases the

appetite. There can be no doubt that electricity furnishes a force to the system that may be utilized in several ways. One has been mentioned above; another may be conversion into heat in a part where the calorific process is deficient; another, the increase of chemical action, all of which are inseparable. Even these may not represent the sum of its influences, as may be inferred from some interesting cases related by Gubler,* in one of which the patient was given the power of voluntary motion in a recently paralyzed arm while the continuous current was passing through it.

To summarize the application of the different forms of batteries we may say:

That for *cautery purposes*, a quantity battery with large surface of elements and low internal resistance is necessary. Such would be the zinc-carbon combination with large elements.

That for *electrolysis*, we want an intensity battery with low internal resistance, such as the zinc-carbon battery.

That for *general tonic* and *stimulant* purposes and for the *relief of pain*, an intensity battery is needed, and one whose current is modified by having considerable internal resistance is to be preferred, as giving a pleasanter current. Such a battery is the Daniell, the Hill, or the Leclanché. However, the Stöhrer zinc-carbon combination, although inferior in this respect, is mostly used for this purpose at the present time, because it may also be used for electrolysis, and is portable. The faradic current also is invaluable for tonic purposes, for the relief of pain, and for the production of muscular contraction.

Dr. Ranney † speaks of the combination of both constant and induced currents, by bringing the secondary faradic current into the circuit of the galvanic battery. Inasmuch as both currents are beneficial in the same condition, it is reasonable to believe that such a combination may be valuable at times.

PHRENOLOGY AND TRAUMATISM.—"You have large imagination; you ought to write poetry," said a phrenologist to a man whose head he was examining. "I do write poetry," replied the individual, "and the bump of which you are now feeling was caused by a blow from an editor to whom I offered a poem. Please don't bear on so hard."—*New York Medical Journal.*

* Gubler, "Principles of Therapeutics," 1881, p. 36.
† New York Medical Journal, 1885.

Syncope or Anæmia of the Brain. A Cause of Asphyxia Neonatorum.—The histories of two cases are related in which, after having made prolonged and unsuccessful attempts at resuscitation by the usual methods, the author, acting upon the theory that cerebral anæmia was causing the asphyxia, inverted the children, thus allowing the blood to gravitate to the brain, with the happy result in each instance, finally, of complete restoration. In both cases, after the breathing had begun to be established, the horizontal position and efforts at artificial respiration were twice resumed, but each time respiration at once ceased. And it was not until after the child had been held head downwards for nearly an hour in the first case, and three quarters of an hour in the second, that normal respiration and circulation were well established. Believing, then, anæmia of the brain, or a condition of syncope, to be the pathological factor in some cases of asphyxia neonatorum, the author would advise for its relief the above ready method of *gravitation of the blood to the brain.*

The advantages which the author claims for this treatment are:

1. It enables one to employ any other method in connection with it.

2. It is totally void of violence.

3. It induces the escape of such fluids as may be in the air passages.

4. Where there is a circulation of blood through the foramen ovale it substitutes the purer blood of the vena cava ascendens for the blood of the vena cava descendens.

5. It gravitates the blood to the lungs, which, there distending the blood vessels, causes additional stimulus to respiration.—*Dr. Noble in American Journal of Obstetrics and Diseases of Women and Children, April, 1886.*

Harper's Magazine tells us that in a western city lives an undertaker, by name Brown, a great wag, and always ready to play a joke; also a doctor who is a joker, and always ready to tell on himself, and a "monument-maker" who was of the same kidney.

One day the doctor was driving at full speed down a business street when Brown spied him. Brown was in his wagon with the sign of his profession on the side. Whipping up his horse, he came as close to the doctor as possible, and glancing around, he spied the monument-maker. Calling to the monument-maker to hurry up, Brown called: "Go on, doctor, go on; we're coming."

The doctor looked around, and dismay was was pictured on his countenance. He whipped up his horse, but all to no purpose, the undertaker and the monument-maker following closely. At last the ridiculous part of the thing struck him, and leaning back in his buggy he gave vent to his laughter, in spite of the thought, "What a sign for a prominent physician this is!"

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CAVUM RETZII AND PRÆVESICAL PHLEGMONS.

Under the name of cavum Retzii or the prævesical space is included a limited anatomical region to which of late considerable pathological importance has been attached. First described by Retzius, the region to which we refer is bounded about as follows: Lying between the peritoneum and the abdominal musculature, and being a space or cavity only in the same sense that the inguinal canal is a passage; *i. e.* when made so by force of circumstances. The so-called inguinal and femoral rings are only rings in fact when something has passed through them, like a hernia, to open them up. Under other circumstances they in no wise resemble rings. So the prævesical space is such in fact only when the areolar tissue which naturally fills it is distended by products of inflammation.

If one delicately dissect the umbilical and hypogastric regions by the following manœuvre, the space may be demonstrated. After laying off the skin the sheaths of both recti are opened, the muscles cut across a little below the umbilicus, and carefully separated from the underlying fascia down as far as the pubis. It will then be noticed that the posterior wall of the sheath is not disturbed, while nevertheless the appearances differ at different hights. Down to 7–9 ctm. below the navel, the surface of the posterior wall is firm and thick as the result of the aponeurotic fusion, but from this level

down to the symphysis the wall is thin, unresisting, and its tissue frequently fatty Sidewise this extends to the outer borders of the recti and blends with the transversalis fascia. The text-books content themselves with saying that the combined aponeurosis of the three abdominal muscles passes in front of the *lower fourth* of the rectus, on either side, and that at this level the latter muscle is separated from the peritoneum only by the transversalis fascia.

This needs more accurate description than the text-books give. The thin, more delicate and frequently fatty portion just spoken of extends from the linea alba to the linea semilunaris. If this be gently raised one comes upon a delicate areolar tissue, distensible and elastic, often fatty, occupying a space between the os pubis and the bladder, gradually merging upon either side of the bladder with the pelvic fascia. It covers the anterior and lateral surface of the bladder, and blends above with the urachus or its remains. At the hight of the semicircular lines it is entirely lost in the transversalis fascia. As Leusser has shown, by a little careful anatomical differentiation this layer of areolar tissue is divided into two, viz., a *cavum submusculare* (Pauzat) or *cavum suprapubicum* extending upwards from the symphysis, and a *cavum prævesicale* or *retropubicum*. These two layers are separated by one more dense and fascia-like, known by Cooper and Velpeau as fascia propria, which is a continuation or prolongation of the transversalis fascia, or the same fascia dignified and confounded by another name.

If one would get an accurate idea of these spaces he must with a syringe and suitable semi-fluid material inject them and then carefully dissect them after the material has set or hardened. In this way he may get an idea how distensible the areolar issue really is.

In recent surgical literature two important papers have appeared concerning abscesses in these spaces; one by Leusser in *Langenbeck's Archiv.* (1885, Bd. 32. Hft. 4), and the other by Pinner in the *Deutsche Ztschft. f. Chir.* (1885, Bd. XXIII., s. 463). Both are carefully prepared papers and merit study. Such abscesses may be idiopathic, or may originate by continuity. The former may arise from injury, local exudation of blood in exhausting disease, and possibly from other causes. The latter arise from disease of adjacent

parts, bladder, uterus, prostate, pubic bone, etc., and possibly from urethral disease. The fascia propria is usually resistant enough to retain the pus within that space where it was formed. The idiopathic abscesses are usually the sub-muscular, and as a rule are marked by less fever and pelvic disturbance. The tumor is more egg-shaped, with its base upward; while the prævesical or retropubic form is more spherical, arising from the pelvis like the distended bladder, while fluctuation is more easily detected through the rectum or vagina.

These collections of pus may disappear spontaneously; still the prævesical, if left, may rupture in any direction, and the sub-muscular either through the peritoneum or the abdominal wall. In the earlier stages diagnosis is difficult. The pain is constant and aggravated by pressure, by which enteralgia may be eliminated. Prognosis must depend largely upon early recognition and suitable operation. Perforation of the peritoneum is, perhaps, the chief danger. Counter opening in the vagina may be indicated in some cases.

Altogether forty-seven cases have been reported in literature. Doubtless a much larger number have been met with but have been ignored or have not been thought worthy of report. From anatomical interest, as well as on account of their gravity, such cases deserve careful study and merit description.

TOXÆMIA OF INTESTINAL ORIGIN.

As the newer physiological treatises appear, either *de novo* or in revised editions, they call attention more and more prominently to the matter of intestinal putrefaction and the absorption of deleterious and toxic substances resulting therefrom. Indol, phenol, leucin, tyrosin, stercorine, excretine, etc., differ much in point of toxicity, the first named being most toxic, but they are all capable of causing varying degrees of malaise, even severe poisoning, when the intestinal canal is insufficiently cleared of its contents.

In 1873 Humbert called attention to what he termed *intestinal septicæmias* (Thèse de Paris, 1873), at a time when the rôle of micro-organisms was not yet recognized. He divided these into two forms according as there was or was not intestinal retention. In the first group he placed constipation, strangulation of the bowel

and acute indigestion. In the second he put typhoid, with ulceration of the pharynx, mouth and balance of the intestinal tract.

According to Bouchard the accumulation of ptomaines and leucomaines in the blood is the result of one or more of the following conditions: Insufficient elimination by the kidneys. Excess of absorption by the intestines. Insufficient destruction by the liver. Excess of production of these alkaloids in the intestine.

The investigations of Tanret and Brieger have demonstrated that as soon as peptones pass out of the stomach they undergo changes by which some of their elements are converted into ptomaines or leucomaines. That this conversion is brought about by the myriads of bacteria of decomposition which abound in the alimentary canal we cannot doubt. Bouley formulated the axiom—"*Every virulent disease is the function of a microbe.*" To this others have added—"*The formation of organic alkaloids is the function of microbes.*" With these axioms as premises granted might be reached the conclusion—"*Every virulent disease is an alkaloid poisoning.*" Universal acceptance is still denied to this dictum, yet as investigations go on we are more forcibly impelled toward it.

At all events even in the physiological and normal state the alimentary canal contains a certain quantity of toxic products, which yet exert no injurious influence so long as they are properly eliminated. When this removal is interfered with, supervene a series of symptoms which he who first recognizes will best treat. Whether this poisoning shall manifest itself as a dyspepsia or as a malaise, whether it shall expend its violence on the nervous system or elsewhere, must depend on circumstances perhaps too occult to be recognized.

Nevertheless, one indication is clear, *i. e.*, catharsis with such disinfection of the alimentary canal as can be accomplished without too much disturbance. For the latter purpose Dujardin-Beaumetz has recommended water charged with carbon bisulphide. This solution has no toxic properties, and in quantities of 50 to 75 c. c. in the day produces nearly complete disinfection of the stools. It is prepared by agitating pure bisulphide with water and then decanting; as shown by Ckiandi-Bey and Pelegot this contains 3-4 grammes per litre. His formula is:

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Pure carbon bisulphide, 25.
Water,..... 500.
Essence of peppermint, gtt. xxv.

Place in flask of say 700 c.c. capacity. Agitate and allow to settle; decant off the clear solution as needed. It is always well to leave a little bisulphide at the bottom to take the place of that lost by volatilization. A tablespoonful of this water is given in milk or with wine and water, with the best of effect.

This method is so extremely simple and easy of application that it deserves the fullest trial. The *pure* bisulphide has an odor much like that of chloroform, and thus prepared and administered need not be offensive.

COMMENCEMENT AT THE GENERAL HOSPITAL TRAINING SCHOOL.

The annual commencement of the Buffalo General Hospital Training School for nurses was held at the Hospital June 29, before an audience which crowded the hall used for the occasion.

The Report of the Secretary, Dr. F. W. Abbott, made it very clear that the past year had been one of growth and prosperity. Among the additions to the hospital and school were a new maternity ward as well as the new laparotomy pavilion and elevator, which latter were the generous gifts of Mrs. Gates. Miss Johnson, the former superintendent of nurses, having resigned, Miss M. K. Howell of New York had been selected for the responsible position and was demonstrating her thorough efficiency in it. During the past year ninety-eight had applied for positions in the school, fifteen of whom had been accepted. The number of pupils would soon be filled up to its capacity of twenty-seven. After the Secretary had read his report, the diplomas were presented, and the hospital badges were then gracefully given to the graduates by Prof. Rochester.

The address of the evening was by Mr. Henry R. Howland, than whom no more acceptable speaker could have been selected. In his peculiarly felicitous vein he traced the progress of the philanthropy which gave origin to such institutions as training schools, and congratulated the founders and benefactors of the Buffalo school on the success which had so conspicuously crowned their efforts.

The class valedictory, delivered by Miss Sarah M. Clement, was a graceful and grateful tribute to those to whom she and her classmates were indebted for the privileges and training they had enjoyed. It was written and delivered in a pleasing manner and gained for its writer general commendation.

The class, numbering seven, was as follows:

Miss L. A. Hodge,.....Lockport, N. Y.
Mrs. J. D. Webb,.....Emporium, Pa.
Miss H. E. Flannagan,.....Paris, Ont.
Miss E. A. Parkes,.....Buffalo.
Miss S. A. Clement,.....Westfield, N. Y.
Miss C. A. Lyon,.....Lewiston, N. Y.
Miss Mary Cruise, ...Alba, Pa.

After the completion of the Exercises a féte was held on the hospital grounds which were illuminated for the purpose.

THE BUFFALO COLLEGE OF PHARMACY.

The first annual announcement of this most commendable new enterprise has just been issued, and is the neatest of the kind that has ever been sent out in this country. We take it that its neat and tasty appearance is but an earnest of the faithful and scientific work which its well-known teachers intend to perform.

By the generosity of Mr. Wm. H. Peabody, of Buffalo, the five students who, at the end of the course rank highest, will have an opportunity to compete for a prize of fifty dollars, to be known as the *Peabody Prize.* At the close of the junior year the student who passes the best examination in the studies and laboratory work of that year shall receive a suitable prize from the faculty.

The new pharmacy school starts out under the very best of auspices, and certainly deserves the best patronage which western New York and the surrounding country can give them.

* * *

It behooves every reader of The Medical Press to remember that the next meeting of the *American Association for the Advancement of Science* will be held in Buffalo during the middle of August. The circular issued by the local committee is comprehensive, and those desiring to see it may address Prof. Julius Pohlman, M. D.,

the local Secretary. Reduced fares on all the railroads and at the hotels may be secured by members or by those who become such.

It would seem superfluous to rehearse the advantages of membership in this National association; nothing would please us better than to see its ranks swelled by a large accession of medical men. We are sure that every physician who can find time to attend some at least of its numerous sessions will find himself largely the gainer thereby.

* * *

A WHILE ago we nudged in the side our friend of the *Weekly Medical Review* for alluding to Dr. Watson as the author of a *monogram* on amputations. He gracefully acknowledges the corn by reminding us that this was the doctor's *initial essay* on the subject.

* * *

THE MEDICAL PRESS extends a warm welcome to Dr. Ernest Wende who, after a long foreign tour of study and observation, has now located in Buffalo where he will devote himself exclusively to dermatology. To those who do not know him personally Dr. Wende's name is familiar through several contributions—either original or solicited—from abroad. It is gratifying that we can promise our readers still other articles from gentlemen of world-wide fame, secured through his kind interest. Prof. Oscar Liebreich, of Berlin, has promised to make THE MEDICAL PRESS the sole recipient of his contributions to American current literature, and the names of other gentlemen, second only in reputation to his, shall appear in due time over original contributions.

* * *

DR. E. N. BRUSH, formerly of Buffalo, sends us the Annual Report of the Pennsylvania Hospital, in whose department for insane males he is the Assistant Physician. The hospital seems to be doing remarkably good work in its out-patient service for the gratuitous treatment of the mentally afflicted.

We have been looking for some time for the Manual which Dr. Brush has in preparation concerning the care and nursing of the insane. We believe that he contemplates the speedy publication of such a work.

From a recent number of the *Hahnemannian Monthly* we clip the following:

"Another mental condition characterizing Anacardium is a propensity to swear. Now, do not suppose that I recommend Anacardium for the cure of profanity, when it exists as a result of low morals; far from it. When, however, the propensity to swear comes as a result of mental disease, Anacardium may do noble work. I once treated a minister who exhibited a remarkable *penchant* for profanity. Try as hard as he would, he could not help it. Anacardium made a complete cure in his case.

Another remedy, producing a disposition to swear, is *nitric acid;* but I have never seen it do any good in these cases, excepting after the abuse of mercury."

We shudder to think what a host of our fellow citizens must have indulged an inordinate taste for anacardium and nitric acid, and trust that some statute may be enacted prohibiting or at least controlling their sale.

Correspondence.

LETTER FROM WÜRZBURG.

WÜRZBURG, June 15, 1886.

EDITOR MEDICAL PRESS:

Prof. Maas, the present occupant of the chair of surgery at the Würzburg University, is not so well known in America but that he deserves an introduction to the readers of the PRESS as one of the most active workers in the advancement of German surgery since the era of antiseptics. His lack of fame abroad must be ascribed to his never having been engaged in any great literary work requiring translation, confining the publication of his researches to the surgical congresses and journals.

As a methodical teacher of the principles of his department, he keeps the reputation of his chair up to the standard to which it was brought by his predecessors, Textor, Linhart and Bergman. One of the first to become convinced of the correctness of the underlying principles of Listerism, his attention was arduously devoted to establishing its proofs in his bacteriological laboratory, and through this practical knowledge of its requirements he has reduced the complicated and expensive system of dressings to one comparatively

simple and cheap, as the result obtaining as favorable results in an old and unhealthy hospital as some of his more fortunate colleagues can in buildings erected with all hygienic precautions.

At the clinic three antiseptic fluids are in use; this may appear as an unnecessary complication, but as each of them is chosen for some special advantage it cannot be attributed to pedantry.

Corrosive sublimate, as at all German clinics, plays the main figure, but on account of its evil effects on surgical instruments these are laid in a 3% solution of carbolic acid. The third is the acetate of aluminum, and is used in the spray, which still takes part here in even the slightest operations, and for whose usefulness in a clinic of the nature of Prof. Maas', excellent reasons might be cited. This acetate, first introduced by Burow in 1857, possesses the antiseptic virtues common to all the salts of acetic acid in an especially high degree, and also exercises slight styptic properties, which action is often very apparent in wounds with a large oozing surface. Besides, its odor is very refreshing to the operators. All operations on the extremities are performed after Esmarch's complete bloodless method, and the dressings applied before the rubber band is loosened; very often this is first removed after the patient has been in bed for a short time and the limb elevated. Drainage tubes are almost never employed, their place being supplanted by means of button-holing the skin or by the insertion of slips of gauze. Iodoform is also seldom seen, especially of late, as Maas holds an outspoken aversion towards it. Extensive experiments have been conducted under his supervision in the laboratory during the past months to show its inefficiency as an antiseptic by developing a large variety of cultures in iodoformized gelatine. The wound is directly dressed by sublimate gauze impregnated with the following solution:

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Corrosive sublimate,	1.0
Sodium chloride,...	50.0
Glycerine, ...	200.0
Distilled water,....	2000.0

The gauze, thus soaked, is dried, and preserved for future use in air-tight jars. It is aseptic as well as antiseptic, and through the addition of salt and glycerine possesses valuable hygroscopic quali-

ties thus obviating the necessity of drainage tubes, and is rendered very pliable. A goodly quantity of such gauze is used, then some sublimate cotton applied, and the whole encircled by sublimate bandages. Rubber cloth and paper have also been discarded. This makes a very permanent dressing and is especially praiseworthy as it may be prepared by one's self without excessive expense or loss of time.

As the abundance of clinical material bears no comparison with that of the hospitals in larger cities, specialties, such as abdominal surgery, are not well represented. Twenty-eight per cent. of all the cases entered on the surgical records are of a tubercular nature. Although this appears as a very large proportion, it is exceeded by that of Gottingen where König places as much as 35% under that heading.

As this disease is especially apt to appear primarily as a joint affection, resections are of every-day occurrence, the more so as Maas is an advocate of early operation. Consequently, persons on whom two or three joints have been resected may frequently be seen; thus a few weeks ago two individuals were presented, one in whom both knee-joints and the wrist-joint had been removed, and in the other both hip-joints. Both could walk easily with the use of a cane. Perhaps the most interesting case of the past semester came for operation last month. A woman, thirty-eight years old, had, for fourteen years, suffered a tumor to grow on the left side side of her neck to enormous dimensions, it reaching from the base of the neck upward almost to the level of the top of the skull, and laterally beyond the shoulder, so that, in fact, the head rather appeared as an appendage to the growth. The long duration of its growth, and the otherwise fair condition of the patient's health, excluded cancer and as severe difficulty in respiration and deglutition were beginning to exhibit themselves, removal was determined upon.

The operation was performed with masterly precision and celerity, doing great credit to Maas as an anatomical surgeon. By means of careful dissection and doubly ligaturing all vessels before cutting them, astoundingly little hemorrhage occurred, so that the loss of blood from this source could not have exceeded ten ounces. The open wound, extending from the clavicle to above the ear,—it also

having been necessary to remove all the superficial cervical muscles so that the common carotid artery was laid bare in its entire cervical portion while the internal jugular vein was tied and partly excised,—presented the aspect of a neat dissection on a living subject.

The tumor proved to be a myxo-fibro-chondrom. The woman made an excellent recovery and is soon to be subjected to a plastic operation to cover the large granulating surface.

Dr. O. L. Schmidt.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, July 6, 1886.

Reported by Charles G. Steele, M. D.

The president, Dr. W. W. Potter, in the chair. Drs. DeLancy Rochester, Elmer E. Starr and Thomas F. Dwyer were elected members of the Association. Dr. Samuel Lewis, president of the New York County Medical Society, was present and briefly addressed the meeting regarding the aims and objects of the New York Physicians' Mutual Benefit Association.

Dr. E. T. Dorland read a most interesting paper on the "Use of Tartar Emetic in Hyperæmic Hysteria." In a number of cases he had used tartar emetic with most satisfactory results. Hyperæmic hysteria is found most often in early life, in those in whom the cerebro-spinal organism predominates. In the anæmic form of hysteria sedatives and anti-spasmodics are used to advantage, but in the hyperæmic form something a little more revulsive is needed. Dr. Dorland then gave the history of three cases in which he exhibited tartar emetic. It should be well diluted with water, and as high as six grains can be given within a moderate limit of time.

Under the head of discussion, Dr. J. W. Grosvenor said he had always used the cold douche in the anæmic form, and chloroform in the hyperæmic.

Dr. F. W. Bartlett said these cases require a great amount of

discrimination. Where there were convulsive efforts he gave ether.

Dr. F. S. Crego stated that the books spoke of the use of emetics in the hyperæmic form of hysteria. He had found the monobromate of camphor of use, but morphia is harmful. The doctor urged the necessity of following up the treatment during the paroxysms with tonics, etc.

Dr. William Ring thought Dr. Dorland's treatment would do where there was a full pulse and a high temperature, but not in the anæmic form. He has given ipecac with success.

Dr. H. R. Hopkins differentiated between the two kinds of hysteria. He had found that a large number of patients had a high degree of tension of the pulse for a few days previous to the attack. This being the case, the treatment of Dr. Dorland would be entirely correct, as tartar emetic is an arterial sedative. When there is passive hyperæmia, and the pulse very low, tartar emetic would be injurious. Dr. Hopkins has used a one per cent. solution of glonoin.

Dr. P. W. Van Peyma had found it best to control this class of patients by the will. To neglect or anger them was often of use.

Dr. W. W. Potter thought hysteria was often a symptom of another disease; often a neurotic manifestation of some obscure cause.

Dr. M. Hartwig presented a man, a carpenter by trade, who had been sick since October, 1885. He complained of headache and had one chill. The spleen enlarged and then he began to have one chill in the morning and one in the evening of each day. The bowels were costive. Quinine was administered but the man steadily lost weight. In January of this year he began to have swelling of the glands of the neck. Two abscesses formed and were opened. Microscopical examination of the blood showed an increase in the number of white blood corpuscles. No albumen was ever found in the man's urine. The spleen is now smaller; heart normal; pulse 110; temperature 103, at night.

Dr. Hartwig asked for a diagnosis. There was considerable discussion, and diagnoses of the scrofulous diathesis, syphilis and Hodgkins' disease were made.

It was announced that Dr. F. W. Bartlett would read a paper on "Antisepsis in Labor" at the next meeting.

Book Reviews.

DISEASES OF THE STOMACH AND INTESTINES; A MANUAL OF CLINICAL THERAPEUTICS. By Prof. Dujardin-Beaumetz. (Wood's Library for May.) N. Y.: Wm. Wood & Co.

The author of this work is undoubtedly the most eminent therapeutist now living, and his utterances deserve nearly all the authority which his admirers so willingly accord them. The present volume is virtually a translation of the first volume of his encyclopædic *Leçons de Clinique Therapeutique*, a work which has rapidly gone through four editions in France. As one reads its pages he can but be amazed at the erudition possessed by their composer, to whom all facts in physiology, pathology, chemistry and materia medica seem alike familiar. His classification and study of the various forms of dyspepsia alone make the book worth much more than its price. The translation has been most acceptably done by Dr. E. P. Hurd.

A MANUAL OF DIETETICS. By J. Milner Fothergill, M. D. Pp. 255. Price, $2.50, New York: William Wood & Co.

"The day of dietetics has arrived." With this brief sentence Dr. Fothergill commences the preface to his latest literary effort. Those who have read much of his writing, and this *should* be said of all, know his happy style and felicity of expression, and nowhere is it more conspicuous or serves a better purpose than in the work before us. We are learning what our forefathers failed to teach us concerning the superiority of a proper dietary over medicines. In no respect has physiology made greater advances than in the matter of digestion. To be sure views concerning the values of certain foods are not yet reconciled, yet we are approaching unanimity. The English athlete trains on raw beef and eggs; the Hindoo wrestlers on sweatmeats. Many things show that a man *may* become a terrible glutton without apparent disturbance, nevertheless the conviction is growing that we eat more than we need to.

No more entertaining book on foods and feeding has ever been written. Civilization has so far debased our instincts that they are no longer a safe guide, hence the need of such a book, both for doctors and the laity. Such a work deserves to be placed next in importance to one's anatomy, and to be a constant work of reference.

BRIGHT'S DISEASE AND ALLIED AFFECTIONS OF THE KIDNEYS. By Charles W. Purdy, M. D. 288 pages, with 18 illustrations. Cloth, $2. Philadelphia: Lea Brothers & Co. 1886.

Dr. Purdy is well known to the writer as a careful and most painstaking student of diseases of the kidneys, and we welcome his brochure as a deliberate expression of views which have been carefully elaborated. We note with pleasure a treatise in which the anatomical classification of the varied cases of nephritis is relegated to the background or ignored. While the matter of renal anatomy and pathology has been carefully elaborated, and illustrated by original drawings, and while the diagnostic value of the microscope is everywhere insisted upon, the reader is not bothered by those distinctions which are made by the pathologist rather than by nature, and he gains thereby a clearer clinical if not pathological picture.

The chapters on scarlatinal and puerperal nephritis are worthy of all commendation, being at the same time the most concise yet comprehensive of any that we have ever read. They cover two topics of extreme interest which are unsatisfactorily treated of in most large works.

Dr. Purdy is, perhaps, as competent authority as any one in this country in the matter of urinary tests, and his hints and statements throughout the work cover all his contributions on the subject to the various journals. In the matter of treatment his suggestions are more satisfactory than those usually given in such works. Regarded in its entirety we know of no book of its kind which comes nearer our ideal of utility without verbosity than this.

The illustrations are all good save the sphygmograms, which are of no value.

MANUAL OF DIFFERENTIAL MEDICAL DIAGNOSIS. By Condict W. Cutler, M. D. Pp. 161. New-York: G. P. Putnam's Sons. 1886.

A most excellent little manual of diagnosis, covering all those affections treated of in text books on medicine, and presenting in contrasted tabular form the conspicuous features common to or distinctive of each. We have always held that the tabular form was the correct one in which to present such studies, and in this little work the task seems to have been accomplished in a most thorough and satisfying way.

MEDICINE OF THE FUTURE. An Address Prepared for the Annual Meeting of the British Medical Association in 1886. By Austin Flint, M. D., LL. D. Pp. 37. New York: D. Appleton & Co. 1886.

It is well known that the British Medical Association honored both themselves and this country, at their meeting in 1885, by inviting Dr. Flint to address them at their next annual gathering. And it is characteristic of the man that the address he had intended to deliver was carefully prepared some months ahead, and was found among his papers, practically complete, after his lamented death. This has now been issued, in elegant souvenir form, by the Appletons, a well-executed portrait embellishing the opening pages.

Though not caring to quote at length from its sentences, we are struck, as every reader must be, with the constant evidence throughout that Austin Flint was one of the most progressive men that ever adorned the ranks of the American profession. He was a constant reader and kept apace with all the advances of the day, never content to live in the past but always keenly alive to what the future might bring. Perhaps there never was a more brilliant illustration than that furnished by himself that an old man is not of necessity what we call an "old fogy." The very title of his address implies this and a perusal of the same confirms it.

The volume will doubtless find a large sale and will well repay a careful and thoughtful reading. One of its concluding paragraphs will of itself be food for much thought. "It is a pleasant thought that hereafter the practice of medicine may not be so closely woven as hitherto, in the popular mind, with the use of drugs. The time may come when the visits of the physician will not as a matter of course insolve the cöoperation of the pharmacist; when medical prescriptions will be divested of all mystery and have no force in the way of fortifying the confidence of the patient. The medical profession will have reached a high ideal position when the physician, guided by his knowledge of diagnosis, the natural history of diseases, and existing therapeutic resources, may, with neither self-distrust nor the distrust of others, treat an acute disease by hygienic measures without potent medication. When this time comes, a system of practice which assumes to substitute medicinal dynamics for the *vis medicatrix naturæ* will have been added to the list of by-gone medical delusions."

A Treatise on the Diseases of the Nervous System. By Wm. A. Hammond, M. D. Eighth edition, with 112 illustrations. Pp. 945. New York: D. Appleton & Co. 1886.

That eight editions of a given work should be called for in fifteen years is more of a testimonial as to its merits than any criticism, however friendly, could possibly be, and is of itself a compliment vouchsafed to but few authors. Prof. Hammond's treatise is so widely and favorably known that it is perhaps only necessary to call attention to the changes which the last presents in comparison with the earlier editions. The chapters on insanity have been omitted since the author has prepared an elaborate book on this subject alone, where he was able to do it more than scant justice, In a French translation of the sixth edition, by Labadie-Lagrave, the translator added to the original some chapters on nervous syphilis, the symptomatology of cerebral lesions and the pathology of the sympathetic. These the author has gracefully rendered into English, with some additions, and added to the seventh and eighth editions. He has also incorporated a part of Nothnagel's astonishingly careful work on Topical Diagnosis of Brain Diseases, which more completely rounds out his own sections on diagnosis.

An entirely new section on certain obscure diseases of the nervous system has also been added, including Thomsen's disease, Miryachit, Tourette's disease and allied conditions, Inasmuch as information concerning these latter diseases is by no means diffused yet, the addition of this section will largely enhance the value of the work. The author's well-known views concerning cerebral anæmia and hyperæmia do not seem to have undergone any conspicuous change. The section on diseases of the sympathetic seems to us particularly valuable, since their pathology is usually so completely neglected by not only students but writers. The chapter on myxœdema also is not only extremely readable but is a most valuable summary of our knowledge of this *new* disease.

If Dr. Hammond's views were exactly those of other writers there would be no need for this work; but one of its charms is the concise way in which are expressed the opinions of one whose experience with cases probably excels that of any man on this continent. These opinions we hardly care to critically discuss here. The make-up of the work is excellent; one would like, however, to see a more complete index. All in all it is the best work of its class to put into the hands of the profession at large, and it grows ever better with each new edition.

BOOKS RECEIVED.

Through J. H. Matteson, from Wm. Wood & Co.:

Manual of Dietetics: J. MILNER FOTHERGILL.

Diseases of the Stomach and Intestine: DUJARDIN-BEAUMETZ.

Through Ulbrich & Kingsley, from D. Appleton & Co.:

Analysis of the Urine: HOFMANN AND ULTZMANN.

Through Peter Paul & Bro., from Blakiston, Son & Co.:

Practical Therapeutics: E. J. WARING.

From Lea Bros. & Co.:

Bright's Disease: CHAS. W. PURDY.

From G. P. Putnam's Sons:

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Electricity in the Removal of Superfluous Hairs: GEORGE H. FOX.

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HYPNOSIS.*

By J. W. Keene, M. D.
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In his admirable essay on Emanuel Swedenborg, Maudsley uses these words: "The history of the progress of knowledge is a history of the incredible becoming credible, of the strange being found true." (Body and Mind, 2d ed., p. 210.) Fulton's first steamer was the laughing-stock of the town; the first Atlantic cable was a wild dream until persistent effort made it a success; a few years ago the electric light and the telephone were inherently incredible to the majority. And yet in view of what has been accomplished who shall dare fix the limits of the future? Our railroad trains may yet be propelled by electricity; ships may float across the Isthmus of Panama or ride in safety upon a stupendous railway; the Sahara may become a Mediterranean; the Keeley motor may finally "mote."

Science with curious eye is ever prying into the secrets of nature. The miracle bows to physical laws; the supernatural becomes rational. In the processes of the mind as well as in the phenomena of matter the investigations of science are gradually hewing off chunks from the realm of superstition and narrowing her territory. But, like the unspeakable Turk, she clings desperately to every acre over which she has once held sway. The prophets of the Jews, the soothsayers of the Chaldeans, the magi ofathe Persians, the priests of India, Egypt, Greece, and ancient Rome still survive as clairvoyants, mind readers, fortune tellers, spiritualistic mediums, mesmerists, faith healers, *et in omne genus.* History repeats itself indeed,

* Read before the Buffalo Medical Union.

but under new conditions and with unaccustomed limitations. The mysteries of old religious rites still form a factor in the religious observances of to-day. Next to religious beliefs, and often forming a part of them, the consideration of the nature and treatment of disease has been surrounded with the deepest mystery. The two were united in the earlier times. Medicine was a part—a subordinate—of religion. The priest was also the physician. The causes and manifestations of disease were only less mysterious than the activities of the soul. A mystery itself, disease was to be cured by mystic agencies. So long as it was a possession of devils, exorcisms were employed to dislodge them. While epidemics were regarded as manifestations of divine wrath, fasting, prayer and humiliation were naturally resorted to, to appease the offended deity. The savage attempted to conciliate the good spirit by gifts, and to terrify the bad spirit, who could not be bribed, by a horrible din, grotesque contortions, and the most hideous aspect his ingenuity could devise. When disease ceased to be a devil and became an entity of another character, it was to be expelled by medicine through the emunctories. So with our present better knowledge of the nature of disease, our remedies are adapted to an end based on our conception of what that nature is. And yet the old mysteries obtain; the ancient demon is still to be cast out by some occult agency, and the mystic of old reappears as the clairvoyant and the faith-healer of our day. Probably none of these occult agencies of ancient or modern times attained a fame more widely spread, or attracted more enthusiastic devotees than the animal magnetism of Mesmer in the middle of the last century.

This peculiar mental condition has been known under various names, most of which indicate more or less exactly the theory of the individual proposing it. Animal magnetism, electro-biology, odylic or odic force, clairvoyance, mesmerism, braidism, hypnotism and hyponosis are in effect synomyms; of these the last seems preferable as avoding, on the one hand, the Scylla of a theory, and, on the other, the Charybdis of an unmeaning surname. That it is no new thing seems evident from the ancient records. It, or at least something very similar to it, was recognized among the Romans, Greeks and Egyptians; and even as far back as recorded

history goes,—among the Hindus, Persians, Babylonians and Chaldeans, mention is made of the priests curing the sick by laying on of hands and by casting them into a sleep in the mystic and shadowy recesses of the temples. Touching for the king's evil as practiced by sovereigns till within the last century is but a revival, perhaps a survival of a most ancient custom. Valentine Greatrakes in the middle of the seventeenth century usurped this kingly prerogative and became a famous healer of scrofula by the touch.

Gussner, a Swabian priest, in the middle of the eighteenth century, taught that disease was due to demoniacal possession and was to be cured by exorcisms. He threw his patients into a state similar to that induced by Mesmer at about the same time. Indeed, the two charlatans seem to have met at Ewitz in 1743; and Mesmer seeing Gussner cure without the magnets which he himself employed discarded them, claiming that his person was surcharged with this new force to such an extent that he could magnetize not only people by multitudes but the trees in his garden; and in his old age claimed that the sun owed its life-giving properties in great measure to the fact that he, twenty years before, had magnetized it. Others state that he abandoned the use of the magnets in consequence of a quarrel with the Vienna professor Hell, who had supplied them to him. In 1778 he went to Paris where he made many converts and created great popular excitement. His rooms were thronged with the *élite* of the French capital. Clad in rich, oriental garb he received his patients in rooms dimly lighted where mirrors gave the impression of an endless succession of shadowy recesses; and soft music and pleasant perfumes filled the air. In a *bagnet* in which chemicals simmered was stored the mystic force. Metallic rods conveyed it to the invalids who were differently affected by it, but all favorably. His own views of the new force he supposed that he had discovered are thus expressed:

"Animal magnetism is a fluid universally diffused; it is the medium of a mutual influence between the heavenly bodies, the earth, and animated bodies; it is everywhere continuous, so as to leave no void; its subtlety admits of no comparison; it is capable of receiving, propagating, communicating all the impressions of motion; it is susceptible of flux and of reflux. The animal body

experiences the effect of this agent; by insinuating itself into the substance of the nerves it affects them immediately. There are observed, particularly in the human body, properties analogous to those of the magnet; and in it are discovered properties equally different and opposite.

"The action and the virtues of animal magnetism may be communicated from one body to other bodies, animate and inanimate. This action takes place at a remote distance, without the aid of any intermediate body; it is increased, reflected by mirrors; communicated, propagated, augmented by sound; its virtues may be accumulated, concentrated, transported. Although the fluid is universal, all animal bodies are not equally susceptible of it; there are some, though a very small number, which have properties so opposite that their very presence destroys all the effects of this fluid on other bodies. Animal magnetism is capable of healing diseases of the nerves immediately, and others mediately. It perfects the action of medicines; it excites and directs salutary *crises* in such a manner that the physician may render himself master of them; by its means he knows the state of health of each individual, and judges with certainty of the origin, the nature and the progress of the most complicated diseases; he prevents their increase, and succeeds in healing them without at any time exposing his patient to dangerous effects or troublesome consequences, whatever be the age, the temperament or the sex. In animal magnetism nature presents a universal method of healing and preserving mankind."*

Perhaps no better insight into Mesmer's methods can be given than that afforded by the report of the commission appointed by the Academy of Sciences at Paris, of which such eminent scientists as La Voisier, Bailly and Benjamin Franklin were members. I quote at length from the report. "The sick persons, arranged in great numbers and in several rows around the *bagnet*, receive the magnetism by all these means; by the iron rods which convey to them that of the *bagnet;* by the cords wound round their bodies; by the connection of the thumbs which communicate to them that of their neighbors; by the sound of the piano-forte, or of an agreeable voice dif-

* Memoire sur la Deconverte du Magnetisme Animal, pur M. Mesmer, Paris, 1779, p. 74 et seq.
* (Carpenter: Mesmerism, Spiritualism, etc., p. 134.)

fusing the magnetism in the air; by the finger and rod of the magnetizer moved before their faces, above or behind their heads, or on the diseased parts, always observing the direction of the poles; by the eye of the magnetizer; but above all by the application of his hands and the pressure of his fingers on the hypochondria and upon the regions of the abdomen; an application often continued for a long time, sometimes for several hours. Meanwhile the patients in their different conditions, present a varied picture. Some are calm, tranquil and experience no effect; others cough, spit, feel slight pains, local or general, and have sweatings; others again are agitated or tormented by convulsions. These convulsions are remarkable in regard to the number affected with them and to their duration and force; and are characterized by the precipitous, involuntary motions of all the limbs and of the whole body, by the constriction of the throat, by the violent heavings of the hypochondria and the epigastrium; by the dimness and wandering of the eyes; by piercing shrieks, tears, sobbing and immoderate laughter. They are preceded or followed by a state of languor or reverie—a kind of depression and even drowsiness. The smallest, unforseen noise occasions shudderings; even a change of time and measure in the airs played on the piano-forte influences the patients, a quicker motion agitating them more and renewing the vivacity of their convulsions. Nothing is more astonishing than the spectacle of these convulsions; one who has not seen them can form no idea of them. The spectator is equally astonished at the profound repose of one part of the patients, and at the agitation of the rest; at the various accidents which are repeated, and at the sympathies which are established. Some patients devote their exclusive attention to each other, rushing toward one another, smiling, speaking with affection, and mutually soothing their *crises*. All are under the power of the magnetizer; it matters not in what state of drowsiness they may be; his voice, a look, a gesture brings them out of it."

This sceptical commission came to the conclusion that it was not common magnetism, since it failed to exhibit the common phenomena of that agent. The imagination was recognized as largely contributing to the results manifested, and it was denominated a "pretended agent." The commission further reported that "on blindfolding

those who seemed most susceptible to its influence, all its ordinary effects were produced when nothing was done to them but when they imagined they were being magnetized; while none of its effects were produced when they were really magnetized, but imagined that nothing was being done; that in like manner, when brought under a magnetized tree, nothing happened if the subjects of the experiment thought they were at a distance from the tree, while they were immediately thrown into convulsions if they believed they were near the tree, although really at a distance from it; that consequently the effects actually produced were produced purely by the imagination; that these effects, though some cures might be wrought, were not without danger, since the convulsions excited were often violent and exceedingly apt to spread, especially among men feeble in body and weak in mind, and almost universally among women; and finally, that there were parts of the operation of magnetizing which might readily be turned to vicious purposes, and that immoral practices had already grown out of them."

This adverse report, arrayed against him the faculty of the academy, and he was finally obliged to retire from Paris as he had previously fled from Vienna. It will be seen from this report that animal magnetism, as practiced by Mesmer, was a very different thing in its phenomena from what we now call mesmerism or hypnotism. This change has been wrought in part by his own disciples and followers, and in part by the scientific investigations of Braid, in England, Charcot and Richer, in Paris, Tamburini and Seppilli, in Italy, Carpenter, Heidenhain, Tuke, Hughlings Jackson and others.

The Marquis de Puysegur found that Mesmer's effects could be produced by gentle passes.

In 1845 Baron von Reichenbach announced his discovery of odylic or odic force, a force allied to magnetism but not identical with it. He recognized it as the animal magnetism of Mesmer. He considered it as a polar force present in all material substances, but especially in magnets and crystals. When these substances were drawn over the person of a subject he would feel a prickling, streaming, or shooting sensation in the part, would smell odors proceeding from the poles or see flames issuing from them. Reichenbach's "sensitives" were irresistibly attracted by the magnet, so that

the whole body was dragged after it. But the simple experiment of placing the magnet in a delicate balance proved that the odylic force resided alone in the human nerve. The universal law of mutual attraction was thus allowed free opportunity to manifest itself; but the balance failed to tip when the "sensitive" placed his hand near the magnet.

Braid, a surgeon of Manchester, Eng., seems to have been the first to investigate mesmerism scientifically. He made numerous experiments, always from the standpoint of the sceptic, and was largely assisted by Mayo and Carpenter. His work is, perhaps, the most complete and satisfactory of any upon the subject up to his time. He designated it hypnotism or neuro-hypnotism. His method of inducing it was peculiar, and based on the mental concentration afforded by fixing the eyes upon a bright object held so near them as to render convergence of their axes necessary. The phenomena exhibited by his subjects in this condition were due, as all such phenomena are, to their state of expectancy and obedience to external suggestion.

Mr. Braid relates * that when in London he called upon an eminent physician who was in the habit of using mesmerism in his practice, and who explained to Mr. Braid some of the extraordinary effects produced by magnets applied in the mesmeric state. These effects he illustrated upon a patient then in the room, and supposed to be in the mesmeric sleep. The magnet, applied to the hands, arms or limbs, produced catalepsy or rigidity of the member. Mr. Braid was able to produce the same effects, and far more striking phenomena, in the same patient, by his portmanteau key and ring. The effect predicted invariably occurred, showing the astonishing power of mental suggestion to paralyze or energize muscular force; to heighten, diminish or annul sensation, and even to control special sense.

The methods of inducing hypnosis are various; but all, apparently, depend on the principle of the predominant idea or mental concentration. Facility is increased by repetition, and self-hypnotization is possible. This mental concentration is usually aided, physically, by the stimulation of a sensory nerve for a longer or shorter time, by which a corresponding portion of the brain may be

* Carpenter: Mesmerism, Spiritualism, etc. P. 131.

said to be exhausted. This may be done through the sight, by fixing the eye upon a bright disc or some well defined object. If held close to the eye—six to eight inches—the constant effort necessary to focus the eyes upon it aids in the abstraction, and also, no doubt, in the exhaustion of brain areas. And yet, vision is not always essential, since the blind can be hypnotized. The monotonous ticking of a watch, or counting up to several hundred, may induce the state; or monotonous passes by the magnetizer may be employed; indeed, in susceptible persons, the mere expectancy of hypnosis is enough to induce it. Some of the most remarkable mesmerists seemed actually to accomplish this as they claimed to do—by the superiority of their will-power. Abbé Faria gazed fixedly at his subjects in an imposing manner, and in an impressive voice uttered the command, "Sleep!" which they instantly obeyed. Two hundred years ago Kischer, a Jesuit priest, showed that a hen can be hypnotized by holding her with her beak to the ground for a few moments. She will remain in this position for some time, motionless, and insensible to the pricks of pins thrust into the body. Czermak showed that the experiment will succeed with other animals, such as crabs, frogs, geese, ducks, and sometimes with dogs. The question also arises whether certain animals have not the power of throwing other animals into this state in order to secure them as their prey. The fascination which a cat or a snake exercises upon a bird so as to render it incapable of efforts to escape may be a manifestation of this power. The claim made by some operators that they can exercise this power at a distance seems to be disproved. The subject may fall into the hypnotic state if he expects the exercise of the magnetizer's influence, as in cases cited, in which the operator has told the subject that at a given hour on a certain day, he would mesmerize him without being present. The expectancy thus induced may cause the subject to fall into the state, even when the operator had forgotten all about the matter. This was tested at the Medical School of the University and King's College, Aberdeen, by a committee consisting of three professors, two physicians and a clergyman, upon a Mr. Lewis, who claimed this power. Mr. Lewis, with three of the committee, were in one room, while the subject with the other three were in another. None of the movements

willed by Mr. Lewis were performed by the subject, although under the influence of expectancy. The subject made fourteen distinct movements during the five minutes, but none at all approaching what he was willed to do, namely: to lie on the floor, face downward.

Another element which, although not essential to the induction of hypnosis as an important factor in the process, is the voluntary surrender of the will of the subject to that of the operator. That this surrender of the will is not necessary is abundantly proved by the well-known experiments of MM. Charcot and Richer, at the Salpêtrière. They induced the state by suddenly throwing a brilliant electric light upon the faces of persons not expecting it, or by striking a concealed gong. Sometimes attendants or bystanders were thus affected—for whom the experiment was not intended—even to the extent of rendering them cataleptic. A patient in the act of stealing some photographs from a drawer was rendered cataleptic by the sudden striking of a gong in an adjoining room, and thus detected. Hypnosis, or a similar state, may be the result of injury or disease of the brain. The hypnotic state may be ended by a sharp command, by reverse passes, by striking a muscle, by blowing in the face; and often, in the cataleptic form, the forcible moving of a rigid finger or arm terminates the state.

[CONCLUDED IN NEXT NUMBER.]

REFLEX PHENOMENA.

BY H. W. STREETER, M D.
Rochester, N. Y.

[Read before the Central New York Medical Society.]

The characteristic failing of the empirical and the most conspicuous virtue of the rational scientific practitioner, is a total absence in the former and an ever present deep-seated appreciation in the latter of the true relations of local diseases and reflex phenomena. Strictly speaking there can be no such thing as functional disease. There can not be a derangement of force without a corresponding change of matter. As this is better and better comprehended in its full meaning, more importance is attached to a definite physical diagnosis, names of diseases become less numerous, and the limits

of specific therapeusis are rapidly narrowed. As, perhaps, the most familiar and striking illustration of the pathological correctness and practical importance of this subject let me ask you to consider very briefly a few points in connection with the diseases of the reproductive organs. The ovaries and uterus, as we all know, are protected and supported by a cushion of spongy elastic tissue, through which permeate blood-vessels and nerves in lavish profusion. No displacement of the pelvic organs can occur without pressing upon, and to a greater or less extent interrupting the vascular current, no lesion but may produce a similar effect, and the same may occur from external causes. The nerves enclosed in the meshes of cellular tissue are compressed by the turgid vessels, and not only is local distress produced, but a cry of suffering is telegraphed to every organ of the body, and answered by a response of sympathy from the digestive, nervous, circulatory, respiratory, secretory and excretory organs, and none can be said to be exempt from liability to cause or to suffer from reflex irritation. If the proper means are taken for correcting the local disorder, equalizing the pelvic circulation, restoring the nutritive and other systemic functions to their normal tone consentaneously, the local and general symptoms will improve in unison, and success will crown our efforts as far as the physical possibilities will allow; but if the opposite course is taken and the local disease alone is treated and the general condition neglected, or if entire dependence is placed on constitutional treatment and none upon local, failure may be looked for as the invariable rule. The great cause of failure in gynæcological practice is want of a thorough conception of the underlying, predisposing so to speak, conditions. It is not the local lesion or displacement *per se* that deserves serious consideration generally, but the accompanying conditions, either caused by or causes of said lesion or displacement. And on the other hand the real *secret* of success does not lie in any specific treatment or skill of the operator, but in a thorough comprehension and applications of the broad fundamental principles which environ each case.

On the 25th day of July, 1874, I was consulted by Mr. A——, a gentleman about fifty years of age, and apparently a picture of health. He stated that he was obliged to urinate as often as once

an hour during the day, and from three to six times at night, and had considerable lumbar and suprapubic pain. He had suffered in this way for over twenty years with varying though gradually increasing severity, until he had arrived at a condition from which if he could not find speedy relief he was determined to put an end to his miserable existence. During all these long years he had been seeking aid in vain from doctors of all schools and all degrees of regularity. His nervous system was in a state of great debility and irritability, and he complained of chills, vertigo and dyspnœa. His case had been diagnosed as kidney complaint, cystitis, prostatic hypertrophy, with dispepsia, cirrhosed liver and fatty heart, as complications. Upon a very careful examination I could discover no organic disease. His urine was normal and prostate gland small. His meatus urinarius admitted No. 25 bulbous sound, but at two and one-half inches only twenty-three would pass. I explained to him the theory of reflex action, and what was claimed to be the importance of strictures of large calibre. I told him if he desired I would perform internal urethrotomy on him, although I frankly confessed I did not have much confidence in its results, and could not conscientiously give him much encouragement. I introduced a dilating urethrotome and cut the stricture up to the full size of the meatus. To my surprise, as well as his own, he held his water for three hours, and slept soundly all the succeeding night, things which he had not done in years. In a short time all his constitutional and local symptoms disappeared and had not returned at the date of my last examination, four years ago. Being naturally incredulous and deeply inculcated as a student with the conservative teachings of Gross, I have always been slow to accept innovations upon the beaten paths, and looked with suspicious eye upon the startling novelties of modern medicine and surgery. I was amazed by the result of my operation, and I determined to investigate as opportunity should offer, the subject of slight urethral contractions, and ascertain how much importance should be attached thereto, and also how far, if at all, their importance had been exaggerated. Laceration of the cervix uteri does not exist in every case of uterine disease nor always require an operation, stenosis of the nasal passages in every case of catarrh, closure of the eustachian

tubes in every case of deafness, imperfect accommodation or refraction in every supraorbital neuralgia, nor stricture in every case of genito-urinary disease, but the correctness of the pathology of these morbid conditions, and of the operations for their removal, must be conceded by every intelligent and honest man.

On the succeeding 7th day of August I was consulted by J. B., about 30 years of age, and in good general health, with the following history: Three and a half years previously he had an attack of gonorrhœa, which existed in a moderately acute form for about a month, when the discharge ceased and he supposed himself cured. A few weeks later it reappeared, and had persisted ever since in spite of all the usual internal and external remedies, dilatation by sounds, and a course of so-called galvanic electrolysis. His meatus admitted a No. 30 bulb—at 1½ inches only 26 would pass. Upon cutting this contraction up to No. 30 his discharge ceased, and had not returned when I last saw him three years subsequently.

The explanation which suggested itself to my mind was similar to that which had been promulgated by Otis and others, and which I believe to be a reasonable and scientific one, in strict accordance with the pathology of the disease, and established beyond a peradventure by the results of operations, namely: a slight thickening of the urethral mucous membrane is capable of exciting and perpetuating hypersecretion, just as it does on the buceal or nasal surface, and by obstructing the urethra and causing to be retained behind it a residual drop of urine or mucus, will create a secreting surface of greater or less extent. If the acute gonorrhœal inflammation did not completely disappear and leave the capillaries free and normal, stasis, lymph deposit, hyperplasia, in other words stricture, was not liable but inevitable, and no gleet nor other symptom dependent thereon could be expected to be cured until the cause was removed. As in other morbid conditions symptoms may or may not develop. We all know that many a farmer's wife, of phelgmatic temperament and robust health, never suffers from multiple lacerations of the cervix uteri, following frequent pregnancies, while the fashionable flower of ease and luxury is doomed to years of continual misery by utero-pelvic congestion originating from a single slight laceration, and promptly disappearing on its repair.

August 21st following, Willis B. F., aged 25, consulted me for spermatorrhœa of ten years standing, of semi- or tri-weekly frequency, and which had resisted the whole battery of regular and irregular therapeusis, sedative, tonic and hygienic. His general nutrition was fair, but his nervous system was in a condition of extreme debility. He was melancholy, despondent, aimless and ambitionless. Tears or laughter, tremors of fear and dread of impending calamity were excited by trivial causes. The meatus admitted a No. 24 bulb—at one inch a sensitive point which would admit only No. 20. During the passage of the instrument, very carefully and slowly, though but little pain was complained of, he fainted away. While waiting for him to recuperate, and reflecting upon his case, I said to myself, if the slight irritation of passing this instrument is capable of producing through the reflex system such a profound effect, may not the continuous irritation of the peripheral nerves by a point of congested hypertrophied mucous membrane, be sufficient to excite involuntary seminal discharges and unlimited reflex nervous symptoms. I also recalled the familiar fact of the fainting of women during the passage of the uterine sound, and the nausea arising at the very earliest stage of impregnation. I cut the contraction up to the full calibre of the meatus—his emissions soon ceased, and a complete metamorphosis of his personal appearance and character took place. From a timorous, diffident youth he rapidly developed into a bright, vivacious, social being, a self possessed, energetic, successful business man. During the ten years subsequent to the dates of these cases I have had many similar experiences, and I have called your attention to these special forms of disease at considerable length, in the hope that they may be the means of impressing upon your minds, as they have upon mine, the momentous importance of the underlying principle which I have been attempting to elucidate, and which applies to all disease, namely, the vital necessity of recognizing the relation between cause and effect in every attempt at diagnosis or treatment. Momentous feebly expresses the depth and breadth of the subject in its full scope of comprehensiveness over issues involved in our daily professional duties. The practice of treating symptoms and attributing specific virtues to special drugs or methods, whether by the so-called

regular orthodox faculty, the effeminate dispensers of infinitessimal doses of an imaginary materia medica, or open shameless pretenders, is a subterfuge of ignorance and superstition unworthy of the age in which we live. The doctrine that every disease has a distinct physical cause, whether we are able to discover it or not, and that the cure of the same is effected by equally distinct physical means, be it the regulation of hygienic surroundings or natural processes, or the artificial aids of medicine or surgery, is based on science and stands to reason. It is the key note of a battle cry of honest intelligent practitioners against emasculated expectancy and brazen charlatanry, which we may, if we will, individually and collectively ring throughout the world, until we establish the medical profession in its true position of influence and honor as the noblest and highest calling to which a man can devote his life.

THE PREVENTION OF PUERPERAL FEVER.

BY B. G. LONG, M. D.
Buffalo, N. Y.

[Read before the Physicians' Club.]

Preventive medicine, or the prevention of disease, until recently has received but little attention from the profession. Our forefathers wrote upon and discussed the treatment; and beyond the fact that vaccination prevented or markedly modified smallpox (after Jenner's discovery), preventive medicine was practically unknown.

By scientific research and practical experience we are slowly but surely learning that most diseases are preventible; and the physician who can by careful foresight and supervision prevent a disease with all of its suffering, anguish to patients and friends, loss of time and money, is truly more of a benefactor than he who calls in daily, looks at the patient's tongue, counts the pulse, prescribes some remedy which may possibly assist nature in her work of recovering health, and sends in his bill at the end of the quarter.

That this is in no measure appreciated by the general public, or our legislators and governors, is proven by their lack of interest in

the support and maintenance of boards of health and other medical officers.

Dreadful epidemics like the recent smallpox epidemic at Montreal and the cholera scourge abroad seem to be the only means of education for an ignorant and careless public.

Puerperal fever is the one of all others, among preventible diseases, that has received the most attention from the profession; and it is well that this is the case, for it is one of the most appalling of all affections and one that every practitioner ought to be thoroughly familiar with in every detail.

Cholera only visits us at long intervals, and then is not more liable to attack one member of a family than another. The same may be said of smallpox. These scourges have lost much of their terror to the profession and public, through sanitary precautions and vaccination.

But puerperal fever attacks the one who can least be spared from her family and the care of her little ones. Can there be anything that appeals more to our sympathies than the sight of little ones deprived of their mother for what mighty results for good in after life are dependant upon her careful discipline and instruction? In order to prevent or intelligently meet a certain condition, the cause of that condition ought to be determined. That the cause of puerperal fever in its various forms is not definitely known is evinced by the many theories of different authors.

A contributing cause in many instances is undoubtedly the absorption into the system of broken down secundines, etc., from the parturient canal.

In some wide-spread epidemics in the past it has been thought that some poison floated about in the air, which coming in contact with a parturient patient, was either inhaled, ingested with the food or found ingress through the parturient canal and produced puerperal fever; and in support of this theory epidemics occurring in large cities among the better classes, while practically unknown in the poorer quarters, have been cited.

That a relationship exists between puerperal fever and scarlatina, diphtheria, erysipelas, etc., is pretty generally conceded, and is substantiated by those who favor the germ theory of disease, by the

fact that the chain-like micrococci are nearly always present in all; the fact that they have not been found in certain cases does not prove that they were not present.

Puerperal fever, properly speaking, is any fever occurring during the puerperal state. Most cases are undoubtedly due to septicæmia; autogenetic (that is, self-infection by offensive lochia, broken down and decomposed secundines and blood clots, taken into the circulation), or heterogenetic, communicated by doctors, nurses, visitors, instruments, etc.

Occasional cases may be due to malarial or other influences that would cause a rise of temperature in a non-puerperal individual, but which in a puerperal woman take on the character of a genuine puerperal fever, and are misleading as to their true cause.

Barnes, in his latest work, defines puerperal fever as "fever in a puerpera," and thinks it may be due to various causes. He says: "As fevers of various kinds may assail non-puerperal persons, so they may assail puerperae. We must, therefore, abandon the vain attempt to find one definite puerperal fever, and we must recognize the clinical truth that there are puerperal fevers."

"There is, however, one constant, underlying condition of all the puerperal fevers—that is, the puerperal constitution. This puerperal constitution is the soil in which all the disturbing influences work, in which noxious matters, from whatever source, germinate; and which, without always destroying the individual properties of the foreign poisons, impart to all some common features. It is also highly probable that, under mutual reactions of ingested poisons and the puerperal constitution, new innominate poisons may be engendered."

He classes the puerperal fevers under two great divisions, autogenetic and heterogenetic.

"The autogenetic fevers are: 1. The simple excretory puerperal fever, the result of endosepsis or the arrest of the excretion of waste stuff of involution. This form complicates all other fevers. It is itself the only true puerperal fever.

"2. The fever resulting from absorption of foul stuff from the parturient canal, either from unbroken mucous surfaces, or by the open mouths of vessels, or from traumatic surfaces; this is autoseptic. This form also is likely to complicate other fevers.

"3. This, the proper septicæmic puerperal fever, is revealed under the forms of metritis, peritonitis, pelvic cellulitis, thrombosis and general toxæmia.

"The heterogenetic fevers, due to the reception of a poison from without, are divided into 1. The cadaveric poison, the septic stuff from other puerperae, poisons of obscure origin; and 2. The known zymotic poisons, as smallpox, scarlatina, typhoid, diphtheria, erysipelas."

Most of the statistics and writings on puerperal fever, its prevention, treatment, etc., are gleaned from hospital practice. As it is in hospitals where the most cases occur, there is the place where it is best studied and the most stringent measures are employed for its prevention.

More has been learned of the nature of puerperal fever from hospital records and reports, which should be correct as regards the reporting of recoveries and deaths, than from reports from private practice, which are liable to be one sided and at the best incomplete.

Rules that are observed in hospitals are in many instances inapplicable and unnecessary in private practice. It is utterly impossible in many cases of private practice, especially among the poor and ignorant, and there is where the most obstetric work is encountered, to have even the simplest instructions obeyed.

Where the parturient chamber is the living room of the family, and the nurse a neighbor woman who runs in a few times a day, or possibly the husband, and where the patient like her ancestors in the past has been accustomed to get up and attend to household duties on the fourth or fifth day after her confinement, we find that the care of obstetric cases differs from hospital experience, where trained nurses, attendants, necessary utensils and quiet dormitories are to be found.

Very stringent measures have been employed in hospitals, which have been the means of suppressing the ravages of this dread disease and bringing the mortality down to nearly nothing in well regulated institutions. That the same happy result may be obtained in private practice by proper precautions on the part of accouchers, and without observing all the rules observed in hospitals, seems reasonable.

Authorities not only differ as to the cause of puerperal fever, but also as regards the best means of prevention. Some hold the view that parturition is a physiological process, which usually culminates favorably if strict sanitary precautions and cleanliness are observed Others claim that the parturient female is in as great danger as a person having a capital operation performed, and advocate the most strict antiseptic measures and a renovating, which of itself would excite anxiety enough in most housekeepers to produce a condition favorable to the development of puerperal troubles. For worry, and the lack of confidence, or the indications of fear on the part of the medical attendant, go far towards producing an unfavorable state of mind in the patient, which is a factor in the production of puerperal septicæmia. This is demonstrated by the preponderance of puerperal fever in unmarried parturients and in primiparae.

A solemn duty that we owe our patients, and the community as well as ourselves, is the employment of every beneficial precaution and the exclusion of every unnecessary measure for the prevention of puerperal infection.

Undoubtedly many physicians are negligent in regard to this point, and go from cases of scarlatina, erysipelas, diphtheria, etc., to labor cases without using even the simplest precautions; that such a practice is criminal is to my mind indisputable, for I hold that we have no right to expose our patients to influences that we would hesitate to place our own wives and sisters under.

Such negligence is undoubtedly due to a sort of scepticism on the part of many, as to there being any relation between the above diseases and puerperal fever. This scepticism is due to instances like the following which I will relate from my own practice.

A couple of years ago, in a family where the mother was soon to be confined, scarlatina anginosa attacked the father, and a week later the only child, a boy two years of age. The family were in destitute circumstances and not visited by the neighbors, who were afraid of contracting the disease. The mother was obliged to care for the sick with the assistance of her sister, who was a mere girl. Under such conditions I was summoned early one morning to attend the lady in her confinement. She was in a little bed-room off the

living room, in which her sick husband was lying in a muttering delirium; in bed with her was the sick child, covered with a scarlatinal rash, and so sick that an unfavorable prognosis had been given.

Here, thought I, is a case where puerperal infection is almost certain to arise, and what increased my fears was the death of her husband on the day following her delivery. She had a comparatively easy labor, and, notwithstanding the unfavorable surroundings and circumstances, had no rise of temperature nor an untoward symptom.

Such cases as the foregoing, instead of proving no relationship between these affections, lead us to think that some puerperae are not susceptible to infection in certain directions, the same as some people at certain times are not susceptible to the poison of variola, cholera, typhoid fever, etc.

On the other hand cases of puerperal fever have often been traced directly to some infectious element, conveyed by the hands or clothing of physicians or nurses.

In a case under my care, proving rapidly fatal, I have not the least doubt that the poison was transmitted by a physician who examined the patient before I saw her, and who was attending a case of puerperal fever at the time.

In the transactions of the Boston Gynæcological Society we find that recently five fatal cases of puerperal fever, following a case of erysipelas, occurred in the practice of a physician of that city.

How can such disastrous results be prevented? Is every physician, who has even a mild case of scarlatina under his care, to be debarred by his conscience from the care of obstetric cases?

A sufficient precaution, in mild cases, might be, to wear a rubber coat or some impervious garment while visiting patients with contagious diseases, and a thorough disinfection of the hands, face and beard before visiting puerperal patients, and also the additional precaution of making calls upon puerperal patients before contagious cases, each day when possible.

Where two physicians are associated, one should care for the contagious cases and the other the confinement cases. And it certainly seems to be the duty of every conscientious physician in view of past experience to arrange with another to take care of his

obstetric cases, or turn them away, when he is in attendance upon bad cases of diphtheria, scarlatina, etc.

It is unnecessary to speak of the need of scrupulous cleanliness, or the necessity of plenty of fresh air in the lying-in-chamber, or the exclusion of visitors, etc., more than to say such details are of great importance.

Another important point in the prevention of puerperal fever is the proper management of the third stage of labor. While the first two stages of labor are managed very similarly by all accouchers, the third stage is apt to receive different management at the hands of each.

The ancient and honorable method of pure expectancy in the delivery of the placenta, which has come down to us from the fathers of midwifery, has had its day, and has but few advocates at the present time. Strange as it may seem to us, in the past some eminent obstetricians have let the placenta remain in the vagina from twelve hours to five days, rather than use any measures for its removal.

The method of assisted removal, under the name of the Dublin method, and later under the designation of Credé's method has given excellent satisfaction, and is the one most taught at the present time. Those who have not secured satisfactory results with this method have in all probability not carried out the instructions carefully and thoroughly.

Credé's method in his own words is as follows: "It is chiefly important to utilize exactly the proper point of time for pressure with the hand. The hand should be softly laid upon the uterine region; at first very gentle stroking movements over the largest possible surface of the uterus are made, until a contraction is felt under the hand, next grasp with the outspread fingers and hand, or when one hand is insufficient with both hands, the uterus, and at the moment when the contraction seems to have reached its greatest energy, press boldly upon the fundus and walls of the uterus, in the direction of the hollow of the sacrum. To press upon the uterus during the absence of a contraction in order to remove the after-birth, is entirely wrong and does not fulfill the object."

In another place he says: "In innumerable cases I invariably

succeeded, even if the contractions were ever so feeble, in exciting them by gentle and gradually somewhat increased friction of the fundus uteri, through the abdominal walls. And when the contractions reached their height of intensity, I so grasped the entire uterus that the fundus lay in the hand, and the fingers adapted themselves to all sides of the body, and from these points exercised gentle pressure. I always felt the placenta slip out of the uterus under my fingers, and this occurred with so much power that it at once presented itself in front of the vulva, or at least lodged within it."

In later writings he says: "The most advantageous and at the same time perfectly harmless period for expression is the third or fourth contraction, which occurs about five minutes after birth."

From a recent communication from Stadtfeld, of Copenhagen, to the International Medical Congress, I take the following statistics: In 1780 cases of placenta delivery by the expectant method, and 1,611 cases by Credé's method, we find portions of placenta retained in 0.6% of Credé cases, and 1.3% of expectant cases; and fever in 18.3% of Credé cases, and 24% of expectant cases.

In the *Medical Record* of December 29, 1883, Dr. Henry Garrigues, visiting obstetric surgeon to Maternity Hospital in New York reports that he has reduced the mortality from puerperal fever, from nine in one month to practically nothing. This reduction he attributes to an antiseptic dressing which he has introduced.

After the secundines are expelled the patient is washed off with a 1 to 2000 bi-chloride solution, and the vulva covered with the following dressing:

(1) A piece of lint six by eight inches is wrung out of the 1 to 2000 solution, folded lengthwise, so as to be three inches wide; (2) outside of that a piece of oiled muslin, nine by four inches; (3) outside of that a large pad of oakum, and (4) the whole is fastened with four pins to the binder in front and behind by means of a piece of muslin eighteen inches square, and folded diagonally so as to form a kind of boat, five inches in width, for the reception of the other pieces of dressing. These dressings are changed four times in twenty-four hours.

Dr. Garrignes uses the same dressing in private practice, substituting cotton for oakum, and changing three times daily in place of four.

Undoubtedly such a dressing ought to be employed in hospitals, and in private practices when a contagious disease is epidemic in the vicinity of a puerperal patient. It can do no harm in any case, but will be found to be difficult of application and retention in many cases among the ignorant, and can hardly be esteemed necessary except in instances such as the foregoing.

Barnes, in his latest work, before referred to, recommends intra-uterine injections in normal labor. This measure has had some strong advocates in the past, but since dangerous symptoms have been known to follow its use in many instances, it is now used principally after instrumental deliveries, when the hand has been introduced into the womb, and where there is an elevation of temperature, due to retained blood clots, secundines, etc.

The vaginal douche is also less used than formerly, as it tends to disturb and annoy the patient, when rest is the one thing most needed, and is of doubtful value (though less dangerous than the intra-uterine injection) excepting where the lochia become very offensive. These expedients have been carried to extremes by many, but have about found their field of usefulness by the majority of practitioners. I have been accustomed, for some time, to instruct my patients to assume the sitting posture for purposes of urination and defecation, and find that clots are often passed which might be retained if the recumbent posture were maintained, and have never seen any bad results follow such procedure.

To insure tonic contractions of the uterus, ergot in small doses, frequently repeated, acts very nicely. Another efficient remedy, and which in many cases prevents after-pains, is quinine, in tonic doses.

After-pains, when troublesome, must be controlled, so that rest and sleep may be secured.

Summary.—1. Puerperal fever, in many instances, is preventible.

2. Its causes are autogenetic and heterogenetic; the former cause excluded by securing a tranquil state of mind in the patient, with rest, sleep and tonic contraction of the uterus, after the secundines

are expelled; the latter by cleanliness, pure air, antiseptic measures and the exclusion of all infectious matter from whatever source.

3. A relationship exists between puerperal fever and scarlatina, diphtheria, erysipelas, etc.; and, although some parturients are not susceptible to these poisons, the greatest care should be exercised by physicians to prevent infection of those who are susceptible.

4. Credé's method of placenta delivery properly executed, is the safest and best.

5. Intra-uterine injections as a routine practice are dangerous, and vaginal douches are not essential, unless lochia are markedly offensive.

6. The antiseptic pads used and recommended by Dr. Garrigues are harmless, and in hospitals and during epidemics of contagious diseases may be of great benefit.

IDIOSYNCRASIES.

There are probably very few physicians who have not from time to time been seriously annoyed by the idiosyncrasies of people in regard to drugs. These idiosyncrasies are without reason that can be discovered, and cannot be allowed for by any *a priori* judgment. Perhaps one of the most serious is the case of susceptibility to the action of mercurials which some people possess. We have seen a fraction of a grain of calomel cause a most frightful and serious salivation. A very curious circumstance which we have noticed in such cases is that blue mass was tolerated when the system exhibited the most violent reaction against calomel.

There is a very well-known practitioner in Philadelphia who is most violently affected by the odor of hyacinths. We have known a single sprig of hyacinth, put in his room without his knowledge, to cause in a few moments sick stomach, followed by violent, repeated retching, and great general depression, amounting to almost syncope. It would appear as though, if he were shut up in the room with a single hyacinth bulb in full bloom, it would cause his death. A curious feature of this case is that the emanations will produce so much disturbance of his system without his perceiving the odor.

Another very curious idiosyncrasy that has come under our notice is in a lady who is thrown into fainting fits by eating the

smallest piece of butter. We have known her tried by those who thought her condition was purely imaginative by placing a small piece of butter in a dish of mashed potatoes and giving her a tablespoonful, after telling her that there was no butter in it. In a very few minutes she fell off her chair in a condition of swooning.

Some years ago one of the residents of the Pennsylvania Hospital was forced to resign because the moment he went to work in the surgical wards he became afflicted with a crop of boils which would have disrupted the heart of Job with envy. It was only years afterwards that the unfortunate doctor discovered that the boils were produced by the emanations of turpentine, which was, at that time, used in the wards for cleaning off the skin of patients to which the adhesive plaster had remained.

Not long since there came into our office a gentleman to whom morphine was given for the purpose of relieving pain. Contrary to all expectations, a violent diarrhœa was produced by the alkaloid; indeed, so excessive was the flux that it was stopped with difficulty. In this case the idiosyncrasy appears to have been inherited, as the father of the patient was accustomed to use habitually paregoric as a laxative; a teaspoonful of this fluid taken at night would always produce soft evacuations in the morning.

As already stated, there is no way of foreseeing these peculiarities. It ought, therefore, to be the habitual practice on the part of the physician, when prescribing for a patient with whom he has not before been acquainted, to ask as to the existence of any such peculiarities, and to pay attention to the answers received.— *Therapeutic Gazette.*

Vaginal Extirpation of the Uterus. In the *Zeitschft. f. Gynäkol.* Brennecke states that he has removed the entire uterus *per vaginam* for cancer eighteen times without a death. With these superb results it is not strange that he prefers total extirpation to amputation of the cervix, or even that he advocates it for some other otherwise incurable diseases. His paper is a most important contribution to gynæcology, and must do a great deal to remove the disfavor with which the operation is received—especially in this country—for the most part by those who either are timid about operating or who count more failures than successes.

NERVE SUTURING.—Dr. Michael Beverly of Norwich, England, has recently operated with success in a case where the ulnar nerve had been severed by a broken bottle, four months before the operation. A dense cicatrix over the nerve marked the point where the injury had taken place, one and one-half inches above the wrist. There was atrophy of the parts supplied by the nerve, and intense pain when the little and ring fingers were moved.

Under carbolic spray he dissected and found the upper part of the trunk of the ulnar nerve. This was traced down into the tendon of the *flexor carpi ulnaris* with which it was intimately adherent, and accounted for the intense suffering caused by movements of the little and ring fingers. He then dissected until he found the long portion of the ulnar trunk which had retracted and lay just above the annular ligaments. A clean section was made at the end of each part of the nerve trunk and the two fresh surfaces were united by two catgut sutures. The arm was placed on a splint and the hand kept in a flexed position. The wound healed by first intention. Sensation gradually returned into the parts from which it was absent, and it is now, two months after the operation, nearly restored. There is very little difference now between the two hands in either sensation or motion.—*Boston Medical and Surgical Journal.*

THE editor of the *Journal of Cutaneous and Venereal Diseases* is desirous of ascertaining to what extent arsenic is used by American physicians in the treatment of skin diseases, and also the results of their experience as to its therapeutical value.

Information on the following points is requested of every physician who reads this:

Are you in the habit of employing arsenic, *generally*, in the treatment of skin diseases?

In what diseases of the skin have you found arsenic of superior value to other remedies?

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What preparation of the drug do you prefer, and in what doses do you employ it?

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BUFFALO, N. Y., SEPTEMBER, 1886.

PROF. FRANK HASTINGS HAMILTON.

It is but a short time since we had to chronicle the death of one of Buffalo's former citizens, who having established his reputation in this city, was called to a wider sphere of usefulness in the metropolis,—Dr. Austin Flint. As he was followed to New York a little later by his distinguished colleague, Dr. Hamilton, so the latter has quickly followed him to the final resting place.

For years Dr. Hamilton had been in poor health, and the tenacity of his vital processes were symbolical of his tenacity of purpose. Within the past two or three weeks he began to grow very feeble. He suffered from innutrition, with no advance in his pulmonary trouble. This gradually sapped his vitality and his weakness rapidly increased. His mental faculties, however, remained remarkably clear, and he had a complete understanding of his own ailment and its inevitable fatal ending. His own case he discussed with his attending physicians in a calm, impersonal way as though it were that of one of his patients.

Dr. Hamilton was born in Wilmington, Vt., in 1813; was graduated from the Medical Department of the University of Pennsylvania in 1833, and first settled in Auburn, N. Y. He was professor of surgery at the Fairfield, N. Y., medical school in 1839, and in the following year at the Geneva, N. Y., medical college. From Geneva

he removed to Buffalo, where, with the late Drs. Flint and White, he took a prominent part in the establishment of the Medical Department of the University of Buffalo, in connection with which he is so fondly remembered by all of the older practitioners in this city. It was here that he did most of the work on fractures and dislocations upon which he based the treatise that gave him world-wide fame.

In 1860 he sought a wider sphere of usefulness and removed to Brooklyn where he became the first professor of surgery in the Long Island hospital in that year. Early in the civil war, in 1861, Dr. Hamilton became surgeon of the thirty-first New York regiment, and was made brigade-surgeon after the battle of Bull Run, and surgeon of General Keyes's corps in 1862. A year later he became a medical inspector of the United States army, in which position his work was notable.

Of the Bellevue Hospital Medical College he was one of the founders in 1871, and professor of surgery there from that time to his resignation in 1875. As a writer on medical subjects Dr. Hamilton was voluminous, learned and an accepted authority.

It was eminently appropriate that a special meeting of the city society of which a report appears on another page, should have been called to honor his memory. The brief but touching memorial read by his old friend, Dr. Rochester, was most cordially received, and by resolution directed to be spread upon the minutes of the meeting.

Dr. Hamilton's many noble characteristics were too well-known, in this his old home, to need comment here. A man of most sterling integrity, whose every impulse was straight-forward, he endeared himself alike to the profession and the laity. A gentleman of the old school, he has passed away from earth and left a void which no man can fill. Hamilton's successor, in the fullest sense of the term, will never be found.

TRAUMATISM AND TUBERCULOSIS.

Thanks to the investigations of the surgeons and pathologists we have arrived at a period when we can say that scrofulous disease is tuberculosis in some of its protean manifestations; that there can no longer be any doubt as to their identy, and that having found a

self-defining name there is no longer any excuse for retaining the old one. But there is another question, which is still a vexed one, as to the influence of traumatism in its bearing upon the production of those distinctive lesions formerly known as scrofulous. The importance of this will be apparent on reflection. For instance, a prominent orthopædist in this country ascribes all hip-joint disease to a previous injury, and considers these cases as traumatic while he scoffs at their well known tubercular character. He utterly neglects to note the *diathesis*—which we may stigmatise as *scrofulous* if we will—which permits a slight disturbance to provoke so marked a reaction. It is as if we were to say that it is the pressure of the finger that makes the pistol go off and not the powder it contains. Misled by the aggressiveness with which he has put forward his views many of his admirers have accepted them without sufficient reflection or study. This matter receives attention somewhat commensurate with its importance in a work just issued by Prof. Lannelongue, of Paris, on "Coxotuberculosis," under which significant synonym for hip disease he clearly indicates its pathology. He therein gives some points in the history of the teaching concerning the matter which are of interest. One of the first to clearly express an opinion was J. L. Petit, who held that all coxalgias were of traumatic origin; in this opinion he was followed by Sabatier, Boyer and the Larreys. H. Larrey explained the frequency of morbus coxae among the soldiery by the gymnastic exercises which were part of their drill. Brodie, on the contrary, deemed that coxalgia was very rarely due to a direct cause. In a notable discussion in 1865, in the Société de Chirurgie, Bouvier held that the origin of the disease was nearly always traumatic. Giraldès took the opposite view, and asked if such an origin could be ascribed in many of the cases occurring in early childhood. Verneuil was willing to admit the influence of injury, but gave it a peculiar explanation, which had not been previously afforded. According to this view such cases might really result from violence but only when the patient was already in a general condition which predisposes to it. In an individual who is robust and healthy an injury, such as a sprain, provokes only a synovitis, but in a scrofulous person it is likely to lead to the more serious mischief indicated.

This opinion expressed by Verneuil, more than twenty years ago, may be accepted as the one generally held to-day by pathologists, though some of our American teachers do not yet seem to have placed themselves in line with it. It has received most positive experimental confirmation through the researches of Max Schüller, who made a number of animals inhale tuberculous sputum. Keeping some of them uninjured for purposes of control he injured the joints of others; in every case a typical tumor albus followed each injury, while the uninjured suffered no such trouble. In yet other healthy dogs, who had inhaled no such infectious material, similar injuries caused only transitory symptoms which had about them nothing of the tuberculous character. These investigations of Schüller were too carefully and numerously made to permit of doubt, and established the fact which now only needs universal recognition.

It matters not whether the predisposing diathesis be inherited or later acquired; it is usually easily recognizable, and when observed calls for redoubled attention, both to the general and the local condition. In such cases too early use of the joint involved is to be carefully prevented, while constitutional measures are at once to be instituted. Here the problem of how to keep one limb at rest while still providing exercise for the rest of the body is to be solved to the best possible advantage; at one time plaster of Paris, at another some orthopædic apparatus, or again the weight and pulley are called for; in the latter case general massage will be a valuable adjunct. Here, too, appears the great advantage of a sea shore residence, for that there is in the air along the coast something invigorating which peculiarly adapts it for patients suffering from surgical tuberculosis there is no denying.

THE RELATION BETWEEN HYPNOSIS AND THE CEREBRAL CIRCULATION.

The very scholarly papers by Dr. Keene, in the present and the preceding number of THE MEDICAL PRESS, have doubtless been read with great pleasure by all to whose attention they have come. *Apropos* to these and in view of the similarity between certain stages of hypnosis and some forms of mental disturbance, we attach no small value to experiments upon the condition of the brain in the

former condition. An interesting treatise upon this subject has just been given to the scientific world by Kaan, of Wiesbaden. The author considers in the introduction the various theories of hypnosis, from the pure physiological, now almost completely abandoned, to the vaso-motor theory, which he discusses at some length. The influence of vaso-motor action in hypnosis has been somewhat closely described by Tamburini and Seppelli, who have made many observations with the sphygmograph, and also by Heidenhain, who, after numerous observations with the ophthalmoscope and experiments with amyl nitrite, has abandoned the theory of a pure arterial reflex spasm in hypnosis.

Kaan's design, was by experiment, to throw further light upon Heidenhain's earlier hypothesis. With this object a patient from Krafft-Ebing's clinic was caused to pass through the four stages of hypnosis, lethargy, somnolence or somnambulism and catalepsy, which latter state is characterized by convulsions, delirium, etc. Kaan has given the term *flexibilitas cerea* to a condition in which the limbs can be brought into a certain position by means of great force. This phase is somewhat to be criticised, as waxen flexibility would denote a complete loss of resistance.

Since the author did not succeed in obtaining a complete suspension of any of the stages of hypnosis by the use of the nitrite of amyl, perhaps because this agent, as Rumpf holds, does not act at all upon the smaller arteries, he endeavored to abolish the supposed vascular spasm by means of warm applications to the head. In the course of these experiments he observed that lethargy was regularly removed by the use of warm application, while cold invariably deepened it.

Kaan accepts the doctrine that catalepsy is caused by excessive hyperæmia of the cerebral cortex, and in fact shows that cold applications cause the cataleptic patient to pass into a state of lethargy, while warm ones are without effect. Lethargy thus induced was further completely banished by warm applications, as the patient then passed into the normal wakening condition. Kaan concludes these highly interesting observations by propounding three questions:

1. What is the vascular condition of the brain in the somnolent

and somnambulistic stages, and what changes occur in the cerebral circulation when the patient passes from lethargy to catalepsy?

2. What are we to think of the disappearance of the hypnotic state from the use of cold, and how may we explain the vaso-motor changes?

3. How are reflex vascular spasms caused by peripheral stimuli, and how far does this theory explain the phenomena of lethargy?

The author gives sphygmographic tracings of the radial pulse, taken with Mosso's plethysmograph somewhat modified, and from these as well as from experiments with the ophthalmoscope and some theoretical considerations, he infers that lethargy corresponds to cortical ischæmia with the subcortical functions remaining intact, and the somnolent stage to infracortical anæmia with cortical hyperæmia. In somnambulism the hyperæmia extends from the periphery to the infracortical parts, while in complete hyperæmia the various phenomena of catalepsy appear.

Kaan alludes in a most interesting way to the condition of hemicatalepsy, for example, to right sided catalepsy, which he has produced by hypnotic stroking of the left side of the head.

The author emphasizes that these experiments are not conclusive, and does not assert that these hypotheses correspond with reality, nevertheless the facts which his experiments have brought forward are of much scientific interest.

THE ROMISH CHURCH vs. CREMATION.

During the past month the following item was cabled to the American press and widely circulated.

"The holy office has been asked by many catholics about the cremation of the dead, a custom which is extending in Italy even more rapidly than in this country. The office has just rendered the following decree:

I. Is it permissible to affiliate with societies whose aim is to increase the custom of cremation of the dead?

II. Is it permissible either to have one's own body or that of any one else cremated?

The most eminent and reverend Cardinal fathers, inquisitors general on matter of the faith, after having seriously and for a long time examined the proposed questions, and after having consulted the reverend advisors, have decided to reply:

To the first question negatively, and if the societies mentioned have any affiliation with the Masonic sect the members will be subject to the penance inflicted upon Masons.

To the second question negatively.

Upon this report being made to our Holy Father the Pope Leo XIII., his Holiness has approved and confirmed the resolutions of the most eminent fathers, and has decreed that they shall be transmitted to rectors of parishes in order that they shall take pains to instruct the faithful concerning this culpable abuse in burning the human body, and in order that they shall turn from it the flocks entrusted to their care."

For those familiar with the obstructions which the "Holy Office" has always and ever thrown in the way of progress in science and learning this latest decree will contain no surprise. It is, perhaps, consistent that a church which assumes to so far regulate the private concerns of its devotees as to even make out their diet-list should interest itself in the disposal of their remains. But one cannot help contrasting this present position of the church of Rome with some of its practices in the past. To-day it sees fit to oppose the eminently sanitary and decorous measure of cremation; whereas the history of several centuries is littered with the charred remains of countless human bodies *cremated before death*, not for any sanitary reason, but utterly without reason and because of lack of bigoted credulity. That the church to-day does not practice this *ante-mortem cremation* is rather because it dare not than for any other reason; and without any regret or apology for the thousands of human beings condemned by its various branches, especially by Dominican Friars (which term might be appropriately spelled *fryers*) as well as that monstrous horror the inquisition, it has the phenomenal impudence to issue an edict forbidding the least offensive and most sensible method of disposing of the dead that the world has ever known.

That many will be influenced by such a decree we do not doubt; still we cannot avoid a comparison between this and the decrees by which, for example, war was declared against the Albigenses, during which the town of Minerbe was captured by Simon, Earl of Montfort, and one hundred and forty Manichæans were burned at the stake; during which after the capture of Toulouse twenty thousand "heretics" were tortured and burned, or otherwise slain, and during which, at Carcasonne, "the priests shouted for joy at the burning of so many miserable beings." How can a rational human being bear with such exhibitions as this with patience?

Nor do we close our eyes to the fact that our Puritan forefathers had an effective way of incinerating those accused of witchcraft and the like. Consequently we are not surprised to see many of their descendants putting themselves in the same unenviable light. Thus united with their Romanist allies in their crusade against cremation, the crimes of their ancestors appear only less monstrous than those of Rome because less numerous.

* * *

In a previous issue we stated that a prominent Philadelphia physician had been sued for telling the truth about some quack patent medicines in a clinical lecture. Since then the case has come up for trial before Judge Arnold, and the judge, after hearing the plaintiff's case, directed the jury to bring in a verdict for the defendant. In his charge, the law of the state was declared to be that a scientific lecture before students or a medical association is not only a privileged, but a highly privileged communication, and that malice must be shown to exist in order to render the lecturer liable for an expression of opinion under such circumstances.

* * *

The Forty-first Regular Winter Session of the Medical Department of the University of Buffalo will open Tuesday, September 21. The usual introductory address will be delivered by Dr. F. Whitehill Hinkel, in the lower lecture-room, at the customary hour Tuesday evening.

* * *

The last issue of The Medical Press contained a letter from our special correspondent in Würzburg, in which he devoted considerable space to an account of Prof. Maas and his work. A private letter from Dr. Schmidt states that even at the time that account was written Maas was suffering from an emphysema which was the commencement of his last sickness. He was born in Prussia in 1842, and graduated in Breslau in 1865; he became assistant to Middledorpf first, and was later made professor at Freiburg in 1877, whence he was called to Würzburg in 1883. Thus at the age of forty-one he was called to one of the most important chairs in

Europe, and died at forty-four, admired and beloved by all with whom he came in contact, and respected by every one of his colleagues in that notably advanced *coterie* of surgeons which has done so much to make German surgery everywhere imitated to-day.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, August 3, 1886.

Reported by Charles G. Steele, M. D.

Dr. W. W. Potter presided.

Dr. F. W. Bartlett read a very instructive paper on "Antiseptic Midwifery." He called particular attention to the use of turpentine, it being especially useful as a prophylactic in puerperal fever.

Under the head of discussion Dr. Strong thought that ninety-nine per cent. of the cases of puerperal fever followed incomplete contraction of the uterus. He had never used turpentine in these cases.

Dr. Coakley considered turpentine a valuable antiseptic in surgical and obstetrical practice.

Dr. Clark used the bi-chloride of mercury in his practice. He did not think that purerperal septicemia was due to non-contraction of the uterus.

Dr. Howe said the importance of disinfecting the vagina before delivery, to prevent ophthalmia neonatorum, could not be overestimated.

Dr. Brush, of Philadelphia, had delivered a number of insane women and always used antiseptics, with excellect results.

Dr. Hartwig said that the use of turpentine, as detailed by Dr. Bartlett, was all right so far as it went, but that it was necessary at times to inject something into the vagina. He preferred salicylic acid.

Dr. Potter thought weak solutions of the bi-chloride of mercury, one to five thousand, would answer all purposes.

Dr. Hartwig reported the case of a woman suffering from ascites, in which he had attempted drainage into the sub-cutaneous tissues. There followed great œdema of the thighs and vulva. *Post-mortem* the liver was found contracted, with peri-hepatic adhesions. There was hydronephosis of both kidneys, and the spleen was enlarged. Two tumors, supposedly of syphilitic origin, were found in the spleen.

Summer complaints were reported as the most prevalent diseases at present.

Special Meeting, Saturday, Aug. 14, 1886, to take action on the death of Dr. Hamilton.

The president occupied the chair. In opening the meeting, Dr. Potter said that the profession of medicine in the United States, in the state of New York, and also in the city of Buffalo, has lost one of its foremost leaders. Dr. Hamilton for many years lived in Buffalo, and Dr. Potter thought him one of the founders of the Medical and Surgical Association. He was also one of the founders of the medical department of the University of Buffalo, and was an honored teacher in that school. Dr. Potter paid a sincere tribute to the abilities of Dr. Hamilton as an author and teacher.

Dr. Charles L. Dayton spoke feelingly of Dr. Hamilton, relating several reminiscences of his connection with the distinguished surgeon. He had never met so perfect a man and surgeon.

Dr. Thomas F. Rochester spoke as follows:

"Frank Hastings Hamilton has finished his earthly career, full of years and full of honors, and we cannot doubt that he has been called to receive the reward of a life well spent, thoroughly devoted to the comfort, welfare and amelioration of his fellows. A long retrospect carries the speaker to the days when he was pupil, friend, colleague and intimate associate of the departed, a period of forty years, and through it all a pleasant memory extends. A memory of assistance and advice, of many professional and social interviews, always enriched and illustrated by reminiscence or anecdote in a voice so eloquent, so persuasive and so gentle, that it was music in its every note. Those who have only heard Dr. Hamilton in recent years, since his vocal affection, can form no idea of the spell by which his utterance held the listener in the lecture-room and in debate. For over twenty years Buffalo was Dr. Hamilton's home, and that it was so in every sense of the word, by his professional success, by his hosts of warmly attached friends, by his reputation, extending from this as a center, cannot be doubted, and we felt that

indeed he was going 'away from home,' when he followed within a year, his colleague, the late Dr. Austin Flint, to the great city. He was attracted thither to found a new metropolitan medical college, to find a broader field for his usefulness and to issue with increased prestige his new work on surgery, his 'Fractures and Dislocations' having already been published and received in the most flattering manner. There is some question, in fact, whether this is not the most useful of any of his publications. It contains a mine of statistical information, never before made public, gives the very best advice and has saved many physicians from the persecutions and annoyances of mal-practice suits, which it has done more than any other publication to stop. This work alone has made him an inestimable benefactor to the whole medical profession, and as such he will ever be recognized and remembered.

"In 1871, his voice having failed him so that it was almost impossible for him to articulate, he was obliged to abandon didactic lectures, in which he had been so strong and so attractive, but continued for some years his clinical illustrations and busied himself with his publications, his surgical history of the war and general consultations. The most memorable of these was when, with Dr. Agnew of Philadelphia, he was invited to see the late President Garfield, a call recognizing his eminent ability and skill. As an operator I do not think he had his superior; he was neat, graceful and precise and very fortunate. It is not necessary to enumerate the dates of Dr. Hamilton's varied positions and services; they are already mentioned in the daily journals. It is upon his private life that it is most pleasant to dwell. He was the very soul of chivalry; his reading was varied and the poetry of which he was so fond gave a delicacy and refinement to his thoughts which was constantly manifesting itself in his conversation. He always, when it was proper, sustained his professional brethren, and to the young he was especially cheering. Many a young practitioner, in the doubt and embarrassment of his early days of practice, has passed from his presence with cleared brow and buoyant hopes. I have said he was chivalrous; he was sometimes irritable, and occasionally in the moment of excitement would sometimes say or do something hasty, but he never bore ill will, and often and often has hastened to take back an expression of annoyance in the most frank and honorable manner. He has gone to his rest. Long will he be remembered most pleasantly and gratefully. He has not lived in vain."

Dr. John Hauenstein met Dr. Hamilton in 1842. He was a pleasant as well as able lecturer, and brought his subjects before the class in a vigorous and vivid manner. Dr. Hauenstein was particularly grateful to Dr. Hamilton, who had performed serious operations upon him.

Dr. Bartlett believed that in honoring the memory of the deceased they honored themselves. With Drs. Flint and White, who had gone before him, Dr. Hamilton was one of the pioneers of the

profession in this country, and the value of his work could not be too highly estimated.

Dr. Park assumed that though a younger man, who had had only a slight acquaintance with Dr. Hamilton, he could with proprietry offer his tribute as he had the honor to occupy the chair once filled by the departed. He gratefully remembered a meeting with him years ago, at the county hospital at Chicago. Dr. Hamilton came then as a visitor and was by him shown through the wards, and there being a number of fractures under treatment, he voluntarily explained certain points, from which a corresponding benefit to all was derived. Dr. Park said further that he had the highest regard for Dr. Hamilton's talents and his ability as a surgeon. In some respects he thought that his like, in skill, would not be seen again, and that a great loss had been sustained.

After some further remarks from Dr. Potter relative to Dr. Hamilton's connection with the army, the address of Dr. Rochester was ordered spread upon the minutes in place of the customary resolutions, Dr. Potter being requested to supplement it with reminiscences of the career of the deceased as a military surgeon.

Mc KEAN COUNTY MEDICAL SOCIETY.

Reported by Dr. J. R. McCartey, Secretary.

The Society met in Bradford, June 8. The President, Dr. Dorn, in the chair.

Dr. Reed read a carefully prepared report of the meeting of the State Society, which he had just attended as delegate.

Dr. Dorn brought before the Society a case of amputation of the fore-arm two inches below the elbow. The patient, eighteen years old, four weeks previously had his fore-arm crushed under the wheels of a railway car. The soft parts were injured so high up that it was questionable as to whether a stump could be given below the elbow, since both flaps would necessarily be short and one of them considerably lacerated. The attempt was made, however, and with good results. There was considerable sloughing at first, but when arrested, the wound healed kindly. The stump became

covered with healthy granulations, and is now covered with skin, with the exception of a space of about one and one-half by two inches. It promises a good final result—a gratifying success in conservative surgery. Iodoform was used freely at the beginning and throughout in the treatment of the case.

Dr. Reed reported a case of glaucoma fulminans. The patient woke up in the morning and found herself blind. On examination the doctor found 1 × 2 iris and lens pushed close against the cornea, with only a partial perception of light.

Dr. Straight presented a case of amputation of the first and second fingers, followed by spontaneous amputation of the first phalanx of the thumb. A brakesman, twenty-four years old, had the fingers crushed between the bumpers in coupling cars, necessitating the operation. The case did well enough until the patient became intoxicated, after which erysipelas set in. A blue spot appeared on the end of the thumb, and, although the erysipelas was promptly arrested, the spot became larger, turned black, and extended to within a short distance of the joint, when a line of demarkation formed. The parts sloughed away, the bone dropped out, and the healing commenced and went on kindly and rapidly. The stump now has the appearance of having been a neat flap amputation with the scalpel. There had been no apparent injury to the thumb nor to the artery supplying it.

Dr. Shoemaker asked what success the members of the Society had in drawing a line of demarkation in erysipelas to arrest the progress of the disease. The answers were generally in the negative; when he said that it had been suggested to him to draw the line fully two inches ahead of the apparent evidences of inflammation; that the microbe causing the disease did not at once produce a visible effect, and that they would be found two inches beyond the line of inflammation. He said that where he had acted on the suggestion he had been invariably successful.

Dr. Dorn reported a case of albuminuria in a woman in her sixth month of second pregnancy. He exhibited a specimen of her urine, showing forty per cent. of albumen. The patient had been anæmic for a long time. Two weeks ago her feet commenced swelling, and now her cheeks are puffed, and she is generally œde-

matous; but her urine is normal in quantity, bowels regular, no headache, pulse and appetite good. She complained of seeing little white spots, however. The patient had only consulted him this morning, and he had not yet made an ophthalmoscopic examination, nor had he tested the gravity of the urine. He had prescribed digitalis and squills, and a hydrogogue cathartic. He might combine acetate of potassium with the squills, or with the digitalis and squills. This was his usual course of treatment in the beginning. Where cases did not yield to treatment, and grave symptoms set in, he would abort. In cases of eclampsia he always bled, and invariably with success.

Dr. Murdoch said he was opposed to bleeding; he considered that the symptoms could be controlled promptly by other means, and leave the patient in a better condition. He had been successful in the use of morphia. Its effect, in proper doses, was to relieve the tension of the vessels, and secondarily, to relieve the brain.

Dr. Shoemaker said that ordinarily he used morphia in eclampsia, but in emergency, when he felt the necessity of getting an immediate effect, he would use the lancet; morphia would relieve the tension of the vessels, and cause them to dilate; bleeding would have a similar effect, but be much quicker. He did not consider that uremia was a factor in the production of the disease.

Dr. Reed said that in puerperal albuminuria, in considering the importance of vision, if there was any extravasation in the retina, accompanied with a large amount of albumen, he would give iron and acetate of potassium, and if that did not relieve soon he would induce premature delivery, from the fact that he considered vision a primary point in those cases.

Dr. Benninghoff brought before the Society a boy, 11 years of age, with a cardiac difficulty of long standing, and of obscure origin. The heart's action was irregular, there was a musical systolic murmur, loudest at the base of the heart, with the maximum of intensity in the third left intercostal space, at the margin of the sternum, and heard nearly as loudly in the second right intercostal space, and also under the upper portion of the sternum, and extending up the aorta; would sometimes be heard in the carotids and in the subclavian artery. Some of the physicians stated that they heard a

friction sound. He complained of having occasional pains in the cardiac region, but did not, at any time, suffer from dyspnœa; could run as well as other boys. Pulse somewhat irregular and weak, and rapid. The capillary circulation was good. Had never had rheumatism.

In discussion Dr. Shoemaker said that he considered that there was some pericardial lesion. He could not account for the friction sounds in any other way.

Dr. McCartey said he considered the case to be stenosis of the aortic valves, possibly congenital, or acquired in infancy, when causation might have passed unnoticed.

Meeting of July.

Dr. Winger, member elect, was presented to the society and signed the constitution and by-laws.

Dr. James Nichols brought before the society a case of hopspadias, simulating hermaphroditism in a child one year old. At first glance the penis looked like an enlarged clitoris, lying between the labia majora; but on close inspection it was seen that there was a small, but tolerably well-formed penis, and that what appeared to be the labia majora were folds of the scrotum, that were attached on each side of the penis at the expense of its length below, where there was not enough left to form a bag. The opening was at the base of the penis. On examination the urethra appeared patent, with the exception of an external membrane across the meatus. It was thought an operation would be successful.

Dr. Straight then read a paper on face presentations, a subject on which but little has been written. It is a rare complication, not occurring oftener than once in two hundred cases, and fortunately so, for the difficulties were such that the mother's life was often in jeopardy, and it frequently was impossible to save the life of the child. The paper was interesting, and was brought forward with a special object of inviting discussion.

In discussion Dr. Murdoch said that he had never had a case, but from what he had been taught his first effort would be to change the presentation to that of the occiput; failing in this he would endeavor to promote rotation, and then if this did not

succeed he might feel it necessary to perforate. His first thought would be for the mother's safety. In some cases he would resort to podalic version, although he said that he considered it to be as a rule unadvisable.

Dr. Dorn said that he had had three cases, with two of which he did not have any trouble, but with the third he encountered difficulties that were almost insurmountable. He succeeded in saving both lives, however, but the child died a few days afterwards.

Dr. McCartey said that in a practice of twenty years he had had but two cases, both of which were chin posterior, or rather left mento-posterior. That in one he had succeeded in changing the presentation to that of the occiput, but had great difficulty in holding it in that position until it became fully engaged at the brim, since it had a strong and persistent inclination to turn back again, a difficulty that he believed was usually met with; the other he failed in changing, but upon applying the forceps succeeded in rotating, and got it through without much difficulty.

Dr. Shoemaker then read a paper on "The Pathology of Chorea," a disease about which much has been written. It is sufficiently frequent for physicians to be quite familiar with it. It is easy to diagnosticate. It, as a rule, is self-limited, and will then get well without treatment, and although it is amenable to treatment, it is not cut short by it as much as some other diseases are. There are different opinions regarding its pathology. The doctor stated that the generally accepted theory was, that while in the lower animals it was of spinal origin, in man it was of cerebral origin, from an embolism in one of the cerebral arteries, the fibrin causing the clot having formed in the heart; that many of our best authorities assert that in all post-mortem examinations of cases that had died while suffering from chorea, vegetations had been found on the valves of the heart; that in nearly all cases, a heart murmur could be detected; that it usually was accompanied, or was preceded, by endocarditis, or pericarditis, or both, and that it was closely associated with rheumatism as a cause. The age that was the most susceptible to it was the age that was the most susceptible to pericarditis, endocarditis and acute rheumatism. He felt that the weight of testimony was in favor of the theory that the lesion was of embolic origin, an opinion

held by Dr. Hughlings Jackson, an eminent authority on the subject.

Dr. Buss said that he lately had had a case in a woman, after premature confinement. The woman had been anæmic, but there was no heart disease, and there had been no rheumatic complications.

Dr. Straight said that his opinion, which was based on clinical experience, was that generally the disease was primarily of rheumatic origin; that lately he had been called to two cases, both of which had heart murmurs, and had rheumatic complications.

Dr. James Nichols said that in an experience extending over a long series of years, he had treated a great many cases; that formerly he had not looked for heart murmurs; but latterly he had, and generally found them present. He had always noticed the frequent rheumatic complications, but a number of his cases had been caused by fright, and others were children attending school, where the cause was apparently over-work, and where there had been no apparent evidences of rheumatism.

Dr. McCartey said, that most of our leading minds were of opinion that the disease was of embolic origin, and that Dr. Hughlings Jackson considered it to be on the borderland of paralysis—either disease being caused by an embolism of the middle cerebral artery or adjacent vessels, in chorea there being simply a disturbance of function, while in paralysis there is a suspension of function of the sensori-motor ganglia,—and that those cases following confinement and those cases caused by fright, did not by any means contradict the theory, but supported it; yet the subject was far from being settled. The functions of the sensori-motor ganglia are not yet fully known, and with our present knowledge, it cannot be proved that a lesion of this portion of the brain is more than a factor in the production of chorea, it cannot be proved that it is the real cause. It is considered to be of spinal origin in the lower animals. It has been demonstrated, that in the frog, choreic movements could be produced by irritating the posterior root of the spinal nerves, after all connection with the brain had been severed; and choreic movements would continue in dogs suffering from the disease, for some time after the cord had been severed near the

brain. The physiology of man and of the lower animals is not radically different. In man there are cases on record of patients who had died while suffering from chorea, where no disease could be found in the brain or in the heart at the post-mortem examination, and in view of these facts he could not divest himself of the opinion that the disease had its origin in the nerve centers, or that embolism was more than a factor in the production of the disease. He had been very much interested in the paper, and felt that here was a field open to a great deal of study.

Dr. Benninghoff said that he would not enter into the discussion regarding the pathology of chorea, but would simply express an opinion in a kind of reflected way, by saying he treated the disease by giving Fowler's solution at beginning and throughout the course of the disease.

Dr. Canfield said he gave Fowler's solution and cimicifuga also.

Dr. Shoemaker, in closing the discussion, said that he usually gave the bromides, but his treatment would vary according to the general condition of the case. He sometimes found it necessary to give iron.

Book Reviews.

THE PHYSICIAN'S LEISURE LIBRARY. A series of twelve new valuable medical books, by eminent authors, for $2.50. Single copies 25 cents each. Published by Geo. S. Davis, Detroit.

That most useful and entertaining medical literature can be attractively published at nominal rates this latest enterprise of the well-known Detroit publisher, Mr. Geo. S. Davis, abundantly demonstrates. The series of twelve which he has promised to issue within the year comprises the following, of which the first four have already been received:

Inhalers, Inhalations and Inhalants, by Beverly Robinson, M. D.

The Use of Electricity in the Removal of Superfluous Hair and in the Treatment of Various Facial Blemishes, by Geo. H. Fox, M. D.

New Medications, by Dujardin-Beaumetz; translated by E. P. Hurd, M. D.

The Modern Treatment of Ear Diseases, by Samuel Sexton, M. D.

Spinal Irritation, by William A. Hammond, M. D.

The Modern Treatment of Eczema, by H. G. Piffard, M. D.

Antiseptic Midwifery, by H. J. Garrigues, M. D.

On the Determination of the Necessity for Wearing Glasses, by D. B. St. John Roosa, M. D.

The Physiological, Pathological and Therapeutic Effects of Compressed Air, by Andrew H. Smith, M. D.

Granular Lids and Contagious Ophthalmia, by W. F. Mittendorf, M. D.

Pregnancy, Parturition and the Puerperal State and their Complications, by Paul F. Mundé, M. D.

Practical Bacteriology, by Thomas E. Satterthwaite, M. D.

1. Dr. Robinson's brochure is devoted entirely to treatment by inhalation, in which he discusses the value of medicated sprays, the advantages of topical applications in the respiratory passages, steam atomizers and inhalers, their advantages and objections, vapor inhalations with their therapeutic indications, closing with a useful chapter containing formulæ. His directions are brief and concise.

2. In the treatment of certain diseases of the skin electrolysis has come to play an important part, and in none more so than for the relief of hypertrichosis. Dr. Fox's little monograph is quite complete, and includes all necessary hints for the successful application of electricity for removal of hair and the treatment of various blemishes.

3. Dujardin-Beaumetz's writings need no introduction to the American profession. His latest teachings, concerning not only new drugs but new therapeutic procedures, such as *lavage* (washing out the stomach) and *gavage* (forced feeding), are worthy of most careful study. This work is not merely a study of drugs, but of principles and methods, and cannot be too highly commended. It is published in two parts, comprising together three hundred and twenty pages, and should be in the hands of every practitioner.

4. Dr. Sexton's little manual is based on a study of two thousand consecutive cases. It is essentially devoted to practical matters, such as are of import to the general practitioner, and concludes with a nomenclature of aural diseases, in which we see much to commend. With the methods of treatment no one is better fitted to deal than himself, and he has here done as full justice to himself as his space would permit.

If this series of manuals meets the success which it certainly

deserves, the publisher promises that it shall be continued indefinitely. The paper and type are better than those often met with in books sold for ten times the price of these.

STUDENTS' MANUAL OF THE DISEASES OF MENSTRUATION. By John W. Upshur, M. D. G. P. Putnam's Sons, N. Y., 1886, pp. 200.

The title of this little work does not give a fair idea of its scope. It is rather a short description of the more common diseases of the female pelvic organs. The idea of the book is good, and we wish we could say as much for its execution.

It is, however, by no means a fair statement of most advanced views on many important questions. There is, moreover, little or no original work in it. One or two of its chapters are very misleading, and do not at all give a fair statement of the views which are coming into quite general acceptance. Take, for instance, chapter 8, on pelvic cellulitis or parametritis. There is no statement of the question of pathology in regard to the diseases which so strongly agitate the gynæcological world, while the terms cellulitis, perimetritis, parametritis, and pelvic peritonitis are so used as to create in the mind of the student a hopeless perplexity and confusion. The operation, now nearly abandoned, of bilateral section of the uterine neck for dysmenorrhœa is advocated to the exclusion of the more popular and certainly safer operation of forcible dilation.

But we do not wish to totally condemn the book. There is much that is good in it, and the practitioner can find many helpful suggestions and ideas which, if not new, are at least sound and well worth keeping in mind. The book belongs to the publisher's set of "Students' Manuals," some of which have attained great popularity.

A MANUAL OF PRACTICAL THERAPEUTICS. By Edward John Waring, C. I. E., M. D., Surgeon Major, etc. 4th Edition. Edited by D. W. Buxton, M. D. Pp. 666. Philadelphia: P. Blakiston, Son & Co.

It is now thirty-two years since Surgeon-Major Waring issued the first edition of this work, largely intended at that time for use in the East Indian medical service. The American reprint of the third edition introduced it most favorably to the profession on this

side of the Atlantic, and this fourth edition must give it a most prominent place among our text books. Differing in scope and preparation from such works as those of Wood and Bartholow it can scarcely be considered a rival book, but seems to find a place of its own. Its arrangement is entirely alphabetical; it seeks less to give general conclusions from studies of drugs in classes than to give information of value about individual agents.

Under the revision of Dr. Buxton it has been brought fully up to date, and one may look in it for new remedies with every prospect of gleaning what he most wants to know. It is just what its name implies, a manual of practical therapeutics, not a pharmacopœia, nor dispensatory, not yet a text book concerning the physiological action of remedies. While every student should possess it, it should not supplant those treatises, which, like Brunton's or Wood's, teach a careful study of the action of medicines. By no means the least valuable feature is the index of diseases with appropriate remedies, which occupies sixty pages.

Analysis of the Urine, with Special Reference to the Diseases of the Genito-Urinary Organs. By K. B. Hoffmann and R. Ultzmann. Pp. 310, with 8 plates. New York: D. Appleton & Co. 1886.

The well-known names of the authors of this work are of themselves a guarantee of its excellence. To every man who has ever been in Vienna Ultzmann's name is thoroughly familiar. His coadjutator Hoffmann, being at Gratz, is less known by Americans. There is nothing striking about the general character of the work; its highest recommendation is its well-known reliability as a working guide, whether from the chemical or the microscopical standpoint. The introduction to the history of uroscopy, in which the authors, with a noteworthy abnegation of national pride, ascribe much of our present advance to the labors of Rayer and Becquerel is most commendable. Brief chapters on the anatomy of the urinary organs and the chemistry and physiology of the normal urine lead one directly to the main subject. The book is already so well known that we feel it unnecessary to do more than announce its most satisfactory translation and appearance in attractive form. The translation has been faithfully done by Drs. Brune and Curtis.

MEDICAL AND SURGICAL DIRECTORY OF THE UNITED STATES. Pp. 1455. Detroit: R. L. Polk & Co. 1886. Price $7.00.

This immense work, which has long been in preparation, is now before the profession in most attractive form and apparent completeness. It contains the names of some eighty thousand physicians in the United States, with information concerning three-quarters of them as to their school of practice, date and place of graduation, and official positions if they hold them. It comprises beside this an alphabetical list of the above enumerated physicians, a list of the extinct and existing medical schools and medical journals, all medical societies, hospitals, dispensaries, etc., a synopsis of all laws regulating the practice of medicine, official lists of all army, navy, marine hospital and pension surgeons, location of mineral springs, tables of mortality and longevity, and a vast amount of information beside. It is, in fact, an encyclopædia of that which interests advertisers and a gazeteer of all that interests physicians. In other words, it is invaluable to every man who writes or advertises or cares to know of what is going on around him.

DISEASES OF DIGESTIVE, URINARY AND SEXUAL ORGANS. By Dr. Hermann Eichhorst. Vol. II. of the Handbook of Practical Medicine. Vol. VI. of Wood's Library for 1886.

The abrupt, manly way in which the writer attacks his subjects has already been commented upon, and is pleasant rather than otherwise. By it much valuable space is saved. The more we see of this handbook the more we find in it to commend.

THE GENUINE WORKS OF HIPPOCRATES. By Francis Adams, LL. D. Vol. II. Vol. VII. of Wood's Library for 1886.

Volume two concludes this admirable edition by Adams, which has already received notice in a previous issue. The publishers could not have made a happier selection for reproduction.

BOOKS RECEIVED.

The Works of Hippocrates. Vol. II.

Eichhorst's Hand-book of Practical Medicine. Vol. II. Being Vols. VI. and VII. of Wood's Library.

NOTICE.

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In the *Therapeutic Gazette* for June, 1866, Dr. Musser formulates the following conclusions concerning the value of eucalyptus oil in malarial affections:

1. That the oil of eucalyptus is of decided value in about thirty-three and one-third per cent. of all cases of intermitting malarial fever.

2. That it has no specific value in any one type of the disease.

3. That the longer the duration of the disease, the less liable is it to do good.

4. That relapses are not prevented by it.

5. That its influence on the spleen has not been demonstrated.

6. That a dose of ten drops four times daily is a proper dose, but that five drops every three hours would be of greater value possibly.

7. That good results are not attained as quickly as by large doses of quinine, but that a good effect should be observed within five days at last.

President Dwight, of Yale, whose back shows a sharp curve as he walks, says: "A little girl, after watching me walk for a while, remarked: 'Mamma, I think he is the stoopedest man I ever did see.'" The worthy president always enjoys a good story, even though it be at his own expense.

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A BRIEF HISTORY OF LARYNGOLOGY.

Introductory Address on the Opening of the Forty-first Annual Session, Medical Department, University of Buffalo.

BY F. WHITEHILL HINKEL, M. D.
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The demands upon the practitioner of medicine are becoming year by year more exacting, and at the same time the field of knowledge from which he garners his skill is extending its boundaries in every direction. He who aspires to high success in medical art or science must approach its study with a mind trained by scholastic discipline and stored with general information. A special familiarity with physical science, and the trend of scientific thought and discovery, is now, as never before, a prerequisite to a distinct conception of medical facts, theories and therapeutic methods. The man who, without some preliminary scientific training, undertakes the study of modern physiology, pathology or surgery, is seriously handicapped from the start.

This truth receives tardy recognition in the increasing requirements for admission to our schools laid upon would-be students of medicine, and in the raising of the minimum of medical knowledge required of the candidate for a medical degree. The standard is raised because it is not possible for the man unequal to its present status to apprehend aright the new methods in medicine, dependent as they are on the application of physics, chemistry and biology.

Not alone is a broad preparatory education demanded of the medical student of to-day, but he finds within the borders of our

art a territory so vast that minute familiarity with all its domain is no longer possible to any man. Some sections have been quarried and worked for many years and by many hands; others are but just opened; and still others lie unsurveyed, but by bold pioneers. Though crowded in a commercial sense, the field of medical science furnishes ample room for original exploration, and with more promise of success to-day than ever before.

With this widening of the medical horizon has come a narrowing of the field of study on the part of some, who, desiring special expertness in part, have been compelled to obtain it at the expense of a more intimate acquaintance with the whole. The specialist is a logical outcome from the increasing extent of medical knowledge. Working within comparatively narrow lines, and upon ground unfamiliar to the majority of his colleagues, he year by year opens up new territory for occupation by all the profession. As has been beautifully and truthfully said: "In the early stage of any department of knowledge it is almost a matter of necessity that it should be in the hands of a few. But it is the highest privilege of those who thus devote themselves to the reclaiming of new spots of territory, to be able after a while to hand them over to the commonwealth, to prove that they are now cultivated and worthy of annexation."

Many of the special fields of medical research, or practice, have already conferred much upon general medicine. All have arrived at a stage when they stand ready to give something to them who ask. Some acquaintance with the technique of the special branches of medicine is now a necessity to every physician who aims to give his patients the full advantage of current medical knowledge. The increase of instruction in these departments in our schools shows the appreciation of this truth by those who especially study the needs of students; though the advantages accruing from these opportunities are but too often unappreciated by students themselves until too late.

Of the special departments of medicine none is more intimately associated with general practice, or capable of more frequent service in assisting at a general diagnosis, than laryngology. In our northern states, and especially along the sea coast and the great

lakes, affections of the respiratory tract are much in excess of other forms of disease that claim medical attention. Physical examination of the chest alone supplies more information concerning these affections than does laryngology. The former is often inconvenient or impossible when the laryngoscope can be used with facility; and its revelations always supplement the chest examination in the most useful manner.

Much chronic cough, regarded and treated as bronchial in origin, is a result of irritability of the pharynx and larynx, to be relieved by appropriate local treatment, and not by stomach-deranging expectorants or opiates. Many cases of indigestion, lithæmia, loss of appetite, and malaise, refuse to yield until a nasopharyngeal catarrh is relieved, that, either through irritating secretions, or the production of a state of suboxidation, has been the origin of the general disturbance. Occasionally cases of apparent or real incipient phthisis pulmonalis are benefited more by well directed local treatment of the upper air passages than by any other means. Headache, cough, asthma, nightmare, chorea, epilepsy and other nervous disturbances, occasionally find reflex origin from the laryngological domain, and are relieved by local treatment. Conversely some forms of nasopharyngeal or laryngeal disease depend on, or are aggravated by, disordered digestion, or some inflammation of a distant mucous surface, or derangement of other organs.

A field whose local diseases stand in such intimate correlation with the whole organism, cannot be without interest to the general practitioner. Some acquaintance with the methods of its investigation, its morbid conditions and appearance, and accepted therapeutic measures, would appear to be a necessary part of every physician's training and practice. Unfortunately the existing state of affairs does not carry out this assumption. No department of special practice has won its way so slowly to general recognition, in this country at least, as laryngology. The indifferent—or perhaps more correctly, the unappreciative—attitude of the profession at large toward the laryngoscope can scarcely be exaggerated. Though without it it is impossible to judge accurately of the condition of the larynx, or of its often all too narrow glottis, or of the trachea—those seats of so many annoying or distressing, and often grave or

fatal disorders—yet not one of our physicians in a hundred habitually, or even occasionally, uses this little instrument of precision.

That Americans, always so prompt to recognize and adopt every discovery or invention of practical import, should in the case of the laryngoscope furnish an exception to the rule, is explained by the lack of opportunity to acquire familiarity with its technique or its clinical advantages. Until very recently no medical school included in its curriculum instruction in laryngology. The number offering this opportunity to their students is yet quite limited, and comprises only the more progressive and prominent schools. It is with satisfaction, unmixed with personal feelings, that I congratulate you upon the establishment by your energetic and earnest faculty of a chair of instruction in this department. It is alike indicative of their interest in you, and of the progressive advance of your Alma Mater. I am not unmindful of the honor or the responsibility conferred upon myself, but the recognition extended to laryngology as an essential part of a medical education is preëminently gratifying to me.

It is now something less than thirty years since the laryngoscope was introduced into medicine. When we consider the simplicity of the essential mechanism for examining the larynx—a mirror small enough to be introduced readily to the oro-pharynx, set at an appropriate angle to a convenient handle—it seems remarkable that this method of examining structures, where inspection is of such obvious advantage, should have been discovered so late in medical history.

As is usual in great discoveries, the idea was suggested to many minds, but it was left for one man to clearly and practically solve the problem. A number of apparatuses were devised before this time for examining the larynx in the living subject, but all were impracticable from their complexity or incompleteness, and either failed of their purpose or fell into immediate disuse. Small polished discs of metal, mounted upon slender shanks and much resembling the throat-mirrors of the early laryngologists, are said to have been found in the ruins of Pompeii, and have been supposed to indicate the existence of laryngoscopy amongst the Romans. Their literature contains no trace of a knowledge of this art, and its existence is extremely doubtful.

The first effort to view the living larynx of which we have any knowledge was made about the middle of the 18th century, by Levret, a French physician. He devised ingenious instruments for intra-laryngeal and intra-nasal surgery, illuminating these cavities by light reflected from metal discs. His inventions were in advance of the surgical ideas of his age, and failing to stimulate further thought or effort in their direction they fell into neglect.

At the beginning of the present century Dr. Bozzini, of Germany, devised an instrument for illuminating the larynx. His laryngoscope resembled the cylindrical speculum of the gynæcologist. The distal orifice opened downward at a right angle to the axis of the cylinder; a mirror was inserted above this orifice at such an angle that rays of light were reflected into the larynx, thence back to the observer. The source of illumination was a small lantern placed between the eye of the observer and the proximal extremity of the speculum. This complicated and cumbrous apparatus, so curiously in contrast with our simple instrument, failed to accomplish anything of value to medicine.

In 1829, Dr. Babington, of England, exhibited an instrument much resembling the modern laryngoscope. He used sunlight reflected from a hand-glass, as the source of illumination.

In 1840, the eminent Liston, in his work on surgery, suggested for examining the larynx the use of "such a glass as is used by dentists, on a long stalk, previously dipped in hot water, introduced with its reflecting surface downwards, and carried well into the fauces." Had we record that Liston carried into practice his idea, he might justly be called the father of laryngology, so exactly is the sentence quoted a description of the modern method of laryngoscopy.

A number of other efforts to view the living larynx are on record, but none so successful as those I have mentioned, until 1854, Manuel Garcia, an eminent teacher of vocal music in London, while investigating the physiology of voice-production, conceived the idea of examining with mirrors the action of his own larynx during phonation. He was ignorant of previous efforts at layngoscopy, but with the directness of genius he hit upon the simplest method of its performance. He introduced a dental mirror, mounted as laryngoscopic mirrors are now mounted, to the back of his pharynx, while

by means of a hand-glass he reflected the sunlight upon the throat mirror, and at the same time viewed the reflected image of his larynx in the hand-glass. This is the first successful attempt at auto-laryngoscopy. It required for its accomplishment that control of the muscles of the throat that comes from long discipline, and the power of intelligent and persevering observation—two factors possessed by Signor Garcia in eminent degree. The following year he presented a paper before the Royal Society of London, in which he detailed his experiments, and some interesting and accurate observations of the action of his vocal bands in the functions of respiration and phonation.

These valuable and suggestive experiments and discoveries, like the efforts of Babington, and the suggestions of Liston, appear to have been received by English physicians with characteristic indifference and conservatism. Though the essentials of a working laryngoscope were twice discovered and demonstrated in England—by Babington in 1829, and Garcia in 1854—yet the harvest from the seed thus sown was left to be reaped by foreign hands.

In 1857, two years after Garcia presented his paper, Prof. Türck, of Vienna, began experiments with the laryngeal mirror from a medical stand-point. About the same time Czermak, of Pesth, began the same study and rapidly advanced it to the dignity of a special branch of medical art. There have been rivalry and acrimonious debate in the past between these two and their adherents as to priority in this field. Türck, undoubtedly, first employed Garcia's mirrors for medical examinations. But Czermak so improved the technique of the laryngoscope, overcoming all difficulties in a masterly manner, and so spread the discovery by personal demonstrations throughout Europe, that he is generally and rightly regarded as the founder of medical laryngology.

He substituted artifical light for the uncertain rays of the sun; and increased its brilliancy and efficiency by adapting the concave reflector that had already proved itself a *sine qua non* in ophthalmoscopy. Herein lies the advantage of the laryngoscope as we now have it over previous inventions. They were either too unwieldly for practical use, or the method of illumination was such as to be both obscure and inconvenient. The simplicity of the mechanism

of the laryngoscope is shown by the fact that we now use practically the same apparatus as that with which Czermak made his observations. After the lapse of nearly thirty years we have made no essential addition to his method. Yet the larynx and its functions were studied for centuries before this simple expedient was discovered.

The continental physicians entered with enthusiasm upon the field of investigation thus opened. The names of Czermak, Semeleder, Türck, Störk, Voltolini, Lewin, Von Bruns, and Tobold, are all intimately associated with the early history of laryngology. At first, investigators naturally confined their attention to the larynx and its diseases, though the method of examining the naso-pharynx, and its advantages, were soon discovered. With so much thoroughness were their investigations made, that the text-books on laryngology, published within a few years thereafter, furnish all the student of to-day need desire concerning diagnosis, and much of pathology. While the Germans worked and wrote so industriously upon this theme, it was received by the English, and still more by ourselves, with indifference and neglect. Not until 1864 did the subject appear in our medical periodicals, and then in the form of a critique upon a manual of laryngology, by Gibb, of England. In that same year the late Prof. Elsberg, the father of American laryngology, published a hand-book on "Laryngoscopic Medication." Cohen and Wagner soon contributed to currrent literature, and the "American School of Laryngology" had its tardy beginning.

In the meantime a branch was springing from the root of laryngology, that of late years has grown, upon our shores at least, to overshadow the parent stem. The examination of the naso-pharynx and nasal chambers—under the name of rhinoscopy—followed the discovery of the laryngoscope as a necessary branch of laryngology. It held a subordinate place, though the investigations of Semeleder and others, and especially of Voltolini, rapidly opened up this obscure and difficult field, and pointed out its importance to the otologist. Strange to say, the advantages of rhinoscopy, insisted upon by the earliest writers, are recognized but slowly and imperfectly amongst the older aurists even at this day. Rhinoscopy achieved its first decided triumph when Meyer, of Copenhagen, in 1868, described with great completeness adenoid vegetations in the vault of

the pharynx, their pathology, effects and treatment. Since then, by the aid of improved apparatus and methods of examination, rhinology has grown in scope and importance, largely through the labors of American physicians.

About the beginning of the present decade a number of Americans, who had drunk at German fountains and had been stimulated by the contemporaneous labors of Schrötter, Zaufal, Fränkel, Gottstein and others, began to publish the results of their observation and experience in our climate and amongst our people. Under new conditions, and in a climate predisposing in the extreme to nasal disorders, it is not strange that their attention was directed to the newer and fresher field of rhinology. With this originality of investigation came originality of theory as to etiology and treatment of laryngeal and aural disorders. According to these theories as now accepted, in this country at least, rhinology may be said to occupy the first place in the domain of laryngology. Associated with this movement are the well-known names of Bigelow, Cohen, Robinson, Bosworth, Jarvis, Shurly (an alumnus of '65), Lincoln, Seiler, Allen, Daly, Roe, J. N. Mackenzie and others. Nor must I neglect to mention Zuckerkandl and Hack abroad.

From obscurity and neglect laryngology has won its way amongst us to honorable prominence. Our journals teem with its literature. Reflex neuroses from nasal disease may be said to be the latest medical "fad"—if I may be pardoned the expression. Good work has been done and is doing, and the laryngologist need not feel ashamed of the company in which he is found.

Gentlemen of the Medical Class, I have pointed out to you the wide range of knowledge included in our art to-day, and the impossibility of acquiring expertness in all its departments. I have laid stress, however, on the necessity of a general acquaintance with each department, and have endeavored to show, in the hasty sketch of its development, that laryngology is not only worthy of a share of your attention, but is essential in the equipment of every physician.

With so many demands already upon your time and strength it would be but natural should you resent a new claim upon your attention. But, gentlemen, you dare not flinch or spare yourselves at

the outset of the race you have elected to run, if you purpose to reach the goal amongst the winners. Within the next month about one hundred and thirty medical schools in this country and in Canada will have opened their doors to students. They are not, unfortunately, all honorable bodies, whose first aim is to furnish competent medical instruction, as well as the diploma, giving that knowledge market value. Some, though reputable, are not of our doctrine or faith. Their requirements of admission and graduation vary within great extremes. As Dr. Billings well expressed it in his recent address before the British Medical Association, "We have over eighty gates, a number of turnstiles, and a good deal of the ground is unenclosed common." But these schools, good and bad, all unite in the legal right to confer the degree of Doctor of Medicine, and to indicate by that ineffaceable title that their alumni are legally qualified to practice the healing art, whatever be their knowledge of the laws of health, the vagaries of disease, and the means of relief or cure. About 12,000 young men will be in attendance upon lectures within the next month, qualifying for admittance to the ranks, where over 94,000 physicians of more or less repute already carry on the struggle for existence, most of them as not very "high privates."

These figures, approximated from the Report of the Illinois State Board of Health for 1884, show that the oft-repeated statement that our ranks are over-crowded, though trite in the extreme, is not without good foundation. I have not come before you to magnify the lions in the path, or to discourage the faintest heart among you. But it is well that you should have some conception of the strength of the competition that awaits you. Ignorant carelessness now will ill-prepare you to meet that competition in the future. You must establish yourselves well in the foundations you are laying, or about to lay, if you would erect a creditable superstructure that will stand fast through all vicissitudes. Those of you with brave hearts and earnest purpose will be but stimulated by the task before you. He whom I need to urge to diligent effort and manly earnestness in the study of medicine, has no place now or in the future among you, and the sooner he find it out the more fortunate he. It is a difficult thing to advise men collectively as to their individual actions, and I shrink from attempting it. Your

individual preceptors are much more capable of the task, and to them and your own good judgment I leave it.

There have been important additions and changes in the corps of your instructors, of which of course you are aware, all aiming toward the improvement of your facilities, and the advancement of the school. A chair of Nervous Diseases has been added under the able charge of Dr. Hopkins. Instruction in Orthopædic Surgery will be given by Dr. Bartow. Instruction in Elementary Chemistry will now be given you by the new adjunct, Dr. Vandenbergh, while Prof. Witthaus will devote all his lectures to Medical Chemistry and Toxicology. The most important advantage, perhaps, offered you this year is the Pathological Laboratory under the direction of Dr. Howell, the newly appointed lecturer on Pathology. No branch of your studies is of more importance than this; and, in presenting you with the opportunity for personal and practical work in clinical pathology the faculty have done you a service that you will appreciate fully only in later years. The chair of Larnygology has occupied sufficient of your attention this evening, and I dismiss it with this mention.

The university has widened its scope by the addition of a Department of Pharmacy, reflex benefits from which will undoubtedly accrue to you.

What I have thus passed over with brief mention represents much thoughtful care and management on the part of the faculty, and direct and indirect advantage to yourselves. I congratulate you, gentlemen of the Medical Class, on these indications of the vitality, growth and advancement of our school. I congratulate the faculty, and feel sure that in their hands the Medical Department of the University of Buffalo will go on to still greater achievement and higher rank than it has ever attained in its honorable history.

Since the close of the last scholastic year two names have been stricken from the roll of the living that are closely associated with our past. I need not say that I refer to Profs. Flint and Hamilton. It is not necessary, were I qualified, to speak fit words in their praise. Their names live in their deeds. Let us emulate their industry, earnestness of purpose and simplicity of character. In con-

clusion, let me congratulate you all, students and teachers, upon the restoration to health and his duties of your honored Professor of Practice, Dr. Thos. F. Rochester. This season you will hear his voice again in the lecture-hall and clinic, and may the snows of many winters come and go ere his place shall know him no more.

ANTISEPSIS IN OBSTETRICS.

BY A. DANN, M. D.
Rochester, N. Y.

[Read before the Monroe County Medical Society, May 26, 1886.]

It has come to pass, in these progressive days, that if one has the temerity to cross the threshhold of the lying-in chamber as master of ceremonies, without being armed with a squirt gun and a grip sack of germicides, he does so at the peril of professional ostracism. At least he cannot escape the obloquy that attaches, in some degree, to so-called old-fogyism.

The unpardonable sin just now, in some of the most highly æsthetic professional circles, is one of omission. This is not saying that these are not truly progressive days in the main, nor that asepsis, within reasonable limits, is improper or non-imperative; but it does embody an intimation that there is possibly too much officiousness attending the advent of "that which is born of the flesh."

Let us see if this is correct. Let us take a cursory, and, perhaps, somewhat racy survey of modern modes.

To be thoroughly in accord with the formulated obstetric precepts of the hour, and to ensure the maximum of safety to the parturient, the accoucheur must observe substantially the following precautions: When the supreme moment arrives, and the call comes to repair to the lying-in room, the tired Doctor should whip up Dobbin and hurry home (if he be not already there). As quickly as possible he should shuck off the suit in which he has just attended Mrs. McFadden's youngest for a green apple unpleasantness; then, having taken an elaborate warm bath, and devoted some of his best energies to his ungual appendages (lest some microbe, more wily than the rest, should there find housing), he should don the pride

of his wardrobe, and, with a final and careful adjustment of hair No. 49, he should hurry to his charge; but in doing so he should tack as much as possible and hold his breath, lest some belated microbe should get in with a head wind. On arriving at the house he should immediately call the nurse out into the back room and take an account of stock, concerning the number and varieties of microbes which she may have about her; to avoid any possibility of mistake he should order her to reassume her primitive attire, and be soused in a bath of 90° or 95° F. If she looks at all suspicious after this baptism, she should be run through the wringer; this will make her docile and pliant, because it squeezes some of the self conceit out of her, and, besides, it makes it unpleasant for the germs. After the nurse has been thus sterilized she should be set diligently at work, mopping off the microbes from the superfices of the patient Every nook and cranny of her cutaneous envelope should be carefully gone over, for you never can know where whole families of these microscopic buzzards may be nesting. This done, a previously disinfected suit of snowy linen should be put upon her, and she upon the bed.

By the time these simple preliminaries are accomplished, the accoucheur, after another manual ablution in a solution of mercuric chloride, is ready for the first time to project his digit into the focus of hostilities. The discovery is probably now made that the labor has progressed to the beginning of the second stage, and as it is at this time that sundry rents and abrasions of the genital tract are apt to furnish gateways for the entrance of germs, the parts therefore should receive marked attention. This means, according to the latest advices, that the extreme genitals and adjacent areas should be washed, preferable with some antiseptic solution. If, we are told, when this is done you see a vaginal discharge that looks at all suspicious (and you must look closely and æsthetically for this or you may not discover it), you should throw in a weak solution of mercuric chloride with a syringe. It is but little trouble to do this; besides, it is most gratifying to the patient, and if there is anything that will promote resolution of the *caput succedaneum*, it is mercury and time. Besides, by constringing and robbing the parts of their natural mucus in this way, you scarcely more than double

the danger of perineal laceration a little later on. This is of no consequence, however, so long as you have outwitted the microbes.

Immediately after the woman is delivered the vulvar cleft should be supplied with a bib saturated with the inevitable mercuric chloride. This should be kept in place until the patient is finally washed and reclad in fresh linen. The vulvar dressing then should consist, according to Garrigues, of a "binder" and an "occlusion bandage." This author's directions for applying this bandage, as detailed in the *Medical Record* of December 29, 1883, are as follows: "First wash the patient with a solution of mercuric chloride and cover the vulva with a dressing consisting of a piece of lint, six by eight inches, folded lengthwise so as to be three inches wide; outside of that, a piece of oiled muslin, nine by four inches; outside of that, a large pad of oakum; the whole to be fastened by four pins to the binder in front and behind, by means of a piece of muslin eighteen inches square, folded diagonally like a cravat, so as to form a kind of boat, five inches in width, for the reception of other pieces of dressing." "This dressing," says Garrigues, "is to be put on with the same care as we dress a wound after a capital operation."

Now, if things go on in the future as they have in the past in antiseptic circles, it won't be long before disputes will arise as to the priority of invention of this vulvar dressing. So just now while the thing is fresh, I want to go upon record with an important modification. It is this: As a substitute for the pad of oakum, I would suggest a *drum-major's hat.* This is altogether more pliable and elegant on the outside than a pad of oakum, and when you have filled the inside with disinfected down, I can't see why you haven't got about the correct thing. Besides all this, it was originally designed to lead the procession.

I think you will all concede that no matter how ambitious or swift of wing a flying microbe may be, this barrier will stagger him. He cannot by any possibility reach the coveted eyrie so guarded. The parturient debris so locked in, and the disappointed microbe so locked out, may pool their miseries and wait for Time to arbitrate.

I neglected to state that immediately before this bandage is applied, it is the proper thing to make a final inspection of the lower segment of the vagina and vulvar orifice. This is done for the purpose of hunting out any necrotic patches that may be present.

When found, they should each be touched with a mixture of liquor ferri persulph., and tinct. iod. comp. This may cause great œdema of the parts adjacent to the abrasions, but this, we are told, is easily controlled by evaporating lotions.

In order that the child may escape ophthalmic mischief, it is directed as a prophylactic measure that, as soon as the cord is ligated, its eyes should be carefully and gently washed with soft lint dipped in a saturated solution of boric acid, and immediately a single drop of a two per cent. aqueous solution of silver nitrate let fall between the separated lids, upon the conjunctiva. We are told that this treatment causes nothing more than a conjunctivitis which can be controlled in a day or two. I may be pardoned for expressing the fear that this proceeding will jeopardize the future of finance. For who of those yet to be born will venture to tackle this perplexing problem, should he chance to remember his first experience with liquid bullion?

Again, we are directed that if at any time after labor the lochia should become in the least offensive, we should flood the vagina every 3 to 6 hours with disinfectants of various sorts. If the fœtor still persists, we should invade the uterine cavity with our germicides.

Among the disinfectants and germicides that are in special favor at the present time may be mentioned, 1st, mercuric chloride. This is really the pet. 2d, mercuric iodide; 3d, hydronapthol; 4th, phenol or carbolic acid; 5th, boric acid; 6th, salicylic acid; 7th, potassic permanganate.

Such, then, is a brief outline of the most modern modes concerning antisepsis in obstetrics. The picture, I confess, is a little florid and ill copied by an unskilled hand; but there is neither a tree, stone, nor stream too much. Your artist has not added a single essential detail that is not found in the originial, but he has omitted many. I have heard it urged in a paper to which I listened a little less than a year ago, that no physician ought ever to attend a lying-in woman without either personally douching the uterine cavity every four to six hours for the first four to six days after labor, or instructing the nurse to do so. I have heard others say that this should certainly be done in every instance in

which there is simply a rise of temperature. Let me ask these physicians what is to be gained by intra-uterine irrigation, even though there is a rise of temperature, providing there are no fœtid lochia, which are certainly as reliable a criterion of intra-uterine decomposition as we can have? If fœtid lochia be present with rise of temperature, it is, to my mind, in nine cases out of ten, an evidence that there was some fault in the previous management of the labor, especially in ridding the uterus of the secundines, either by the finger direct, or by securing prompt and thorough contraction of the organ. But if this has been neglected and the fœtid lochia are present, it is not unreasonable to suppose that if the decomposing masses are removed, the fœtor will vanish too. And let me ask again what particular advantage has a solution of mercuric chloride or phenol over warm water in effecting their dislodgment? On the other hand, are not the dangers of intra-uterine antisepsis proper greater than the possible benefits to be derived? Are there not cases of fatal poisoning recorded from intra-uterine antisepsis? Has not salivation to a distressing degree been brought about by this method in women with a mercurial idiosyncrasy? Note the cases of Schroeder recorded in the *American Journal of Obstetrics*, 1884, pages 518 and 935. The first was a primipara with a complete perineal laceration. She was stitched up while being irrigated with a 1 to 1000 bi-chloride solution. Between the fifth and sixth days the patient developed moderate fever, with low pulse and a very fœtid diarrhœa, dying on the twelfth day. The autopsy showed extensive gangrenous destruction of the entire mucous membrane of the large intestine. An examination made at the Patho-Clinical Institute demonstrated the presence of mercury in different tissues of the body.

"The second case" (I quote) "was a young primipara, who developed slight eclampsia, was delivered by an easy forceps operation, and, suffering from uterine atony, was given a hot intra-uterine douche of three litres of a 1 to 1,000 bichloride solution. Soon there appeared general depression, with great hyperæsthesia of the whole body, a subnormal temperature, and profuse fœtid diarrhœa; these symptoms continuing until her death. Autopsy showed most extraordinary alterations in the intestinal mucosa, which was

enormously swollen and partly gangrenous, the change being especially marked in the rectum, and extending into the ileum.

Another case is reported of a puerpera, who, developing fever on the fifth day, was given a large intra-uterine douche of the bichloride 1 to 1,500. She immediately showed slight collapse and, five days after, fœtid diarrhœa, vomiting, and suppression of urine. The autopsy showed, as in the case before cited, inflammation with numerous ulcerations of the large intestine. In yet another case the injected fluid passed directly through the tubes into the peritoneal cavity.

Time forbids the detail of more cases thus ending fatally; others are constantly being reported; one especially in which a single injection of the bichloride of no greater strength than 1 to 2,500 resulted fatally. All these cases have the very same train of symptoms, viz., general constitutional depression, a fœtid and intractable diarrhœa, and albuminurious urine. Now, I submit, would all this have come about if simple warm water had been used? I think not. And wouldn't it have been better, in these cases, if the intra-uterine cavity had not been invaded at all? If there is a sanctum sanctorum in a woman's body that spot is the uterine cavity, and the less intrusion there with hot water or whatever else, under the vast majority of obstetric conditions, the better.

How many more unfortunates must yet be swept into the "undiscovered country" by the antiseptic tides of these latter days, before the folly,—nay, *crime*—will be manifest? how long will it take to appreciate the wisdom embodied in the reply of one of the most noted and successful operators living, who, when mildly criticised because he forbore to use the ultra antiseptic processes now in vogue, impatiently exclaimed: "Fudge! soap and water is a good enough antiseptic for me." So I think it is for us all. Why are we eternally "staggering at gnats and swallowing camels"? If there are decomposing matters in the genital tract, with unmistakable symptoms of sepsis, common sense says, get rid of these matters. Scoop them out, or wash them out. They are not microbes, they are bits of dirt; treat them as such, using the same simple agent that your mother used in the good old days when you came in with face and hands begrimmed from making mud pies. It was all

sufficient for the dirt of those days, and I don't know that dirt is any more injurious now than it was then. If the vagina is abraided, treat its wounds as you would those of like extent in any other part of the body, *i. e.*, keep them at rest, with perhaps an occasional cleansing with warm water. Don't keep up an hourly sopping with some late triumph of the crucible, with the malignant purpose of destroying a possibly innocent microbe that may have come to do a little scavenger work. When I read of that old practitioner down in Pennsylvania, with his record of three thousand and thirty-six obstetric cases and never a death from septicæmia, and yet who never used an antiseptic injection proper in his whole life; frequently hitching up his own horse and driving with his own hands to case after case, and on arriving, plunging those very same fingers, all in mourning, into the genital tract, while the great unsterilized, old-fashioned "nuss" stood by with arms akimbo, smiling approval; when I read of this and remember my own lesser but like experience, coupled with that of many of my friends, I am bound to believe that Nature is far more conservative than some of our modern authorities would have us believe.

When I contrast this old patriarch in medicine and his doings with that other whom I have pictured, with his new suit, his snowy nails, his scrubbed nurse and his scrubbed patient, kneeling on a scrubbed floor, momentarily watching the bloody Thermopylæ with squirt-gun in hand, charged with instant death, ready to asphyxiate the first microbe that dares to pass, and I read tomorrow the gloomy details of the autopsy, I, too, feel like saying, Fudge! And when I learn later that he spent a full half hour hermetically sealing in the lochia with an "occlusion bandage," and went back after he had gotten half way home to see if he hadn't put in three pins instead of four, I am possessed with a spirit of profanity. And when I find another of his ilk solemnly cautioning us to carefully guard against allowing the germ to enter the anus while the patient is at stool, I am so vexed that I can't write any more than just to say that this whole campaign, as waged thus far against the microbes, reminds me of a story which Anna Dickinson,—or Eli Perkins, I've forgotten which,—tells of a certain inn-keeper who was disturbed in his slumber by the caterwaulings of some night-prowler. He found a

poker, but failing to strike a light, succeeded in breaking the hall clock and the hall lamp, then falling, knocked out two front teeth, broke his right arm, and sprained his ankle; in short, hit and hurt everything except the cat.

MORAL—Let us strike a light,—the light of *common sense.*

PACKING IN UTERINE DISPLACEMENTS.

BY H. W. STREETER, M. D.
Rochester, N. Y.

[Read before the Central New York Medical Society, November, 1885, at Syracuse, N. Y.]

I believe more speedy and permanent good can be done, in nine-tenths of the cases of uterine displacements which we are called upon to treat, by packing, than by any other method of treatment available. Where there is a condition of pelvic cellulitis, at all approaching an acute character, we have no means comparable in efficacy with the *hot douche*, and the same is true of the chronic subacute cellulitis, which exists in almost every case to a greater or less degree, in conjunction with proper auxiliary treatment. There are cases in which nothing can be more admirable than the results obtained from the use of the intra-uterine repositor, or the pessary.

But it is seldom that the reposited uterus will retain its reposition after the repositor is withdrawn, and the use of this instrument not unfrequently kindles up more or less cellulitis, so that its use, except in the most careful and experienced hands, is of very questionable utility, to say the least.

While pessaries are capable of doing much good they have the disadvantage of difficulty of adaptation to individual peculiarities, liability of provoking and prolonging cellulitis, and at best they only act as a temporary splint, frequently not relieving the pelvic circulation, which is the real fundamental object to be aimed at, and leaving the patient as badly or worse off than before their introduction. Long experience has lead me to the conclusion that the only time when the intra-uterine repositor or the pessary should be used, is when nothing else will accomplish the desired purpose, or when circumstances render the employment of other and better treatment impracticable.

In hospital and exceptional cases in private practice the typical scientific method of reducing uterine hyperplasia and cellulitis by hot douches and daily treatment can be employed efficiently, and wherever it can be done and done well the pathology of uterine displacements, experience and common sense, a conscientious regard for our patients' welfare and for our own reputation, tell us it should be patiently and perseveringly pursued, as offering the best prospect of producing permanent benefit. But the great majority of patients either will not or cannot carry out this plan of treatment with sufficient precision and for sufficient length of time to secure its full benefit. More likely than otherwise they give it up in disgust at its inconvenience, its tardy results, or at the temporary or imperfect amount of relief obtained, which latter is due rather to imperfect manner of carrying out the details, than to any fault of the method itself. If it cannot be done thoroughly this plan had better not be attempted at all, for it can only result unsatisfactorily. Hence the sceptism of patients, and of many physicians, in the efficacy of gynæcological treatment as a whole.

While recognizing the full percentage of failures, I venture to say that there is no class of cases in which the physician *can* obtain more gratifying results, both in the immediate and permanent relief of suffering, that in the treatment of uterine displacements; and it is to a method which from experience of nearly twenty years, I believe to be the most efficacious, in the widest range of cases, and undeservedly much neglected, that I desire to call attention in this paper. The rationale is, that by draining off the serum, and by firm equable pressure and support, it relieves the congestion and restores the tone and elasticity of the pelvic vessels. It *must* do this in order to produce the effects observed.

It has been objected, that the distension of the vagina would cause relaxation. It probably would in a normal vagina, or after the parts have been restored to their normal condition. Pressure of a limb or foot by a bandage would produce atrophy, if continued improperly, after it had been properly applied to promote absorption of effused products of inflammation. It has also been objected that packing produces pain and irritation. There are exceptional cases where it does, but when properly adjusted they are extremely

rare, infinitely rarer than the cases in which the repositor or the pessary produce similar bad effects. It has also been objected that it has to be repeated every day, a process to which most patients would not submit. This I have not found to be the case, and even if it were, the immediate results are so much more satisfactory, the continuance of treatment is of so comparatively short duration, and the ultimate result is so much better than by other methods, that patients would be amply repaid for their trouble. It is to be performed always with a Sims speculum or its equivalent, in the Sims or genu-pectoral position; preferably the latter in a large proportion of cases of posterior displacements. A pledget of absorbent cotton saturated in glycerine, is to be placed in the posterior *cul-de-sac* in retroversions, and in most cases of prolapse, and in the anterior *cul-de-sac* in antiversions; below this are to be placed pledgets of dry cotton until the vagina is packed as full as can be comfortably borne by the patient. Instructions are to be given to remove one or more pledgets if they produce discomfort. The packing requires to be removed, on an average, about once in three days; greater frequency is not generally necessary, and allowing it to remain longer is likely to produce irritation. While the process is comparatively a simple one, yet its success depends on adjusting the tampons as nicely as possible to effect the desired object; an art which is acquired by practice, and without due attention to which the best results will not be obtained. I am satisfied that failure is due to the *manner* of packing in ninety-nine cases out of a hundred, rather than to the method *per se*, when it does not succeed. Patients generally express a sense of immediate relief, and after the second or third treatment marked improvement is usually noticeable. Systematic semi-weekly treatment is not in ordinary cases necessary for a longer period than six weeks, and less time will often suffice. It should then be repeated at intervals of a week, for a month, daily hot douches being used when the tampons are not *in situ*. The patient should be instructed to return in two weeks for inspection, and when she is dismissed should be impressed with the importance of returning upon the least manifestation of the old symptoms.

Those who have not practiced this method systemically will, I

think, be astonished as I was, at what can be accomplished in this way. Results can be obtained by this method in conjunction with proper abdominal support in anti-displacements, which are totally unapproachable by any other method. A very large class of obstinate chronic office cases, instead of being approached with disgust and distrust, are welcomed with confidence and satisfaction.

It must be constantly borne in mind by him who would reach the acme of success in gynæcology, that every detail of the local and constitutional condition must be scrutinized with the utmost carefulness, that their full import may be thoroughly comprehended, and no indication arising therefrom neglected. Local treatment *alone* or constitutional treatment *alone* are futile, no matter how honestly and faithfully pursued; *together* they have accomplished and are capable of accomplishing results which have been of fully as great importance to the human race, and of which we have as just reason to be proud, as of those accomplished in any other department of modern medicine or surgery—results which are living monuments to the triumphs of science over suffering; to the true glory, nobility and honor of knighthood in the order of Æsculapius.

HYPNOSIS.*

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[CONCLUDED.]

The phenomena of hypnosis may be better understood by comparing them with what is observed in somnambulism, to which it is closely related, or even in ordinary sleep. In this connection, perhaps, it may be admissible to quote from a paper on somnambulism, recently prepared by the writer. It is important to bear in mind that there are degrees of sleep; the body does not fall asleep or awake all at once. There is a gradation in both directions—a twilight which precedes and merges into the night of deep unconscious sleep, and another twilight which ushers in the dawn of awakening. One after another the senses fall asleep; one after another they

*Read before the Buffalo Medical Union.

awake. The special sensory centers may sleep, and the spinal cord be awake. Moreover, sleep in a fluctuating state, some parts may be deeply insensible, while others are only partly so; and these, in their relations to one another, are constantly varying. Let us add to these postulates that there is a tendency of ideas to come together and form some sort of mental imagery, a tendency which has been likened to the so-called nascent state of chemical elements. The resultant combination, the mental image thus formed, even in a state of consciousness, may be incongruous, grotesque and absurd, unless the separate ideas are arranged in order by the will. This is seen in the state of reverie or abstraction, where the almost unconscious sequence of ideas often forms a succession of mental images quite as fantastic as those of dreams. In somnambulism certain centers, ganglia or areas of the brain retain their functional activity, while others are more or less deeply asleep; or, in the language of Heidenhain, the ganglion cells of certain regions of the cerebral cortex are inhibited. * * * It is a physiological law that exaltation of one function induces a corresponding depression in others; the converse may easily hold true—that the inhibition of activity of certain ganglia may admit of, predispose to, and perhaps render inevitable excessive action of other ganglia.

Ordinary sleep, the dream state, somnambulism and hypnotism, then, may be regarded as different stages of the same condition. In the dream, ideation is excited by some stimulus from within or without. In somnambulism, which has been well described as an acted dream, in addition to the stimulus external or subjective of the ordinary dream, some part of the brain, usually a special sense,* is specially active, while the locomotor apparatus is excited. Now add to the condition of the somnambulist a guiding of the acted dream by the suggestion from without, and we have the state of the hypnotized.

The cause of the condition can be assigned only when the cause of sleep is decided. We know, however, how it can be induced, just as we know that general exhaustion of cerebral ganglia tends to induce sleep. The theories offered in explanation of its phenomena have been various, and many of them ingenious.

* Porter: The Human Intellect. P. 346.

Passing by the earlier views of mysticism, of occult force, of animal magnetism, of odyl, a polar force allied to magnetism, we come to the first attempt to explain it from the scientific stand-point by Braid, in 1841. He, in brief, regarded it as the result of a congestion of the cerebral organ of vision and a portion of the brain.

Heidenhain attempted to explain it on the theory of anæmia of certain brain areas; but, finding that the face was usually flushed, that the ophthalmoscope showed the retinal vessels to be congested, and that he could induce the state in persons to whom nitrite of amyl had been administered, he abandoned this view and adopted the theory of inhibition, which had already been invoked in explanation of certain physiological phenomena by Hughlings Jackson, Lauder Brunton and others. The vaso-motor theory of Brown-Sequard and others may also have a place among these theories. This is, no doubt, closely allied to and involved in inhibition, and may prove to bear a causative relation to it. That Heidenhain was not necessarily called upon to abandon the theory of regional anæmia by what he considered the crucial test of hypnotizing a subject affected by nitrite of amyl, seems evident in view of the unsettled condition of the question as to whether the state of the external vessels, or even those of the retina, constitutes a true index to the condition of the intra-cranial vessels. It may be that the theory of inhibition commended itself to him as the better explanation.

This theory of inhibition as explanatory of the phenomena of hypnosis is so admirably expressed by McKendrick that I cannot forbear quoting his language. He in effect voices the views of Heidenhain, of Hitzig, of Fritsch, Ferrier, Hughlings Jackson and others who have advocated inhibition as the explanation of hypnotic activity,—although they may differ materially as to the cause of the inhibition itself, and in regard to its exact modus operandi. "In the case of conscious and voluntary movements," says McKendrick,* "carried out as the result of external impressions, the excitation will pass first to the thalami optici (tactile) or corpora quadrigemina (visual), thence to the cerebral hemispheres where ideas would be called forth and volitional impulses generated; these would then

*Cyclop. Brit. Vol. XV. Article on Animal Magnetism.

be transmitted downwards through the corpora striata (motor) to the crura cerebri and spinal cord, and from thence to special groups of muscles, thus causing specific movements. Suppose now that the portions of cerebral hemispheres connected with ideation and volition were thrown out of gear, and that a similar sensory impression was made on the person. Again the path of nervous impulses would be to the thalami optici (tactile) or corpora quadrigemina (visual), and from thence directly through the corpora striata (motor) to the crura cerebri and spinal cord, then passing out to muscles and causing movements as precise as those in the first instance, and apparently of the same character. The difference would be: in the first, there would be movements following perception, ideation and volition; in the second, the same class of movements would be effected by an automatic mechanism without any of the psychical operations above alluded to."

This theory, McKendrick justly observes subsequently, has the advantage of simplicity, but the wonder is, if this be all, that hypnosis does not occur oftener. Indeed the very devices that we often employ in endeavoring to go to sleep are capable of inducing hypnotism in some subjects; and Hack Tuke expresses surprise that persons do not sometimes throw themselves into an actually hypnotic condition in attempting to go to sleep.*

Prof. Laycock's theory of the condition of the encephalic ganglia in mesmeric sleep is, in brief, that consciousness and volition are suspended and the brain placed in the condition of the true spinal or reflex system. This, it will readily be seen, is but another form of expressing the theory of inhibition.

The theory that the spinal cord is endowed with sensation and volition as held by Hammond and some others, Maudsley regards as an explanation of the obscure by something obscurer still.†

The phenomena observed, the "objective symptoms," as Tuke calls them, vary with the type. Charcot and Richer recognized three distinct types, stages or forms of hypnotism—the cataleptic, the lethargic and the somnambulistic. This classification is generally adopted by writers on the subject as a convenient basis for

*Sleep-walking and Hypnotism. P. 62.
†Body and Mind. 2d edition. P. 17.

grouping the manifestations. In the first form, the cataleptic, the limbs retain for some time any position in which they are placed. In the second, the lethargic, the relaxed muscles contract in a peculiar and definite manner when manipulated in a certain way; in the third, the somnambulistic, we have the state usually seen in public exhibitions, known as the mesmeric sleep.

The pupils are dilated and insensible to light. A slight strabismus is often present so that a person hypnotized is unable to read a paper till it is held close to his eyes. Braid says the pupils are dilated at first, but subsequently contract, though still insensible to light.

The condition of the cerebral circulation, as has already been mentioned, is not yet definitely determined. Brown-Sequard's experiments on animals—presumably his favorite Guinea-pigs—rendered unconscious by irritating a certain point in the medulla while the cervical sympathetic was divided, indicate that this inhibition of mental functions is not due to contraction of the vessels of the cerebrum.

Respiration and pulse are at first much quickened. Tamburini, from tracings taken with the pneumograph, finds the respirations doubled in frequency, and the inspiratory pause suppressed. M. Richer has made similar tracings with a like result. These tracings serve to detect simulation; since in the hypnotized subject the tracings are uniform from beginning to end, while in the simulator irregularity in rhythm in the latter part of the tracing with deep and rapid depressions indicate the muscular fatigue caused by the efforts to simulate. The sphygmograph showed the character of the pulse to be unaltered although increased in frequency. Mr. Braid found the cardiac disturbances so great in some of his subjects that fearful of accident he resolved the hypnosis.

M. Richer has also made tracings with the myograph, which shows a marked difference in the muscular contractions of the arm of a hypnotized person in the state of cataleptic rigidity, and an arm held out by one not hypnotized.

Reflex action is favored by the hypnotic state, as in animals deprived of the cerebral lobes and for the same reason, namely, that portions of the cortex are rendered functionless, and its inhibiting

power weakened or destroyed. The tendon reflexes are exaggerated, diminished or normal, according to the stage. Richer has shown that they are exaggerated in the lethargic type, lessened in the cataleptic while remaining normal in the somnambulistic stage. We would naturally expect them to be exaggerated in all cases.

The reaction to galvanism is unaffected, but a strong current may resolve the catalepsy just as a puff of air will do.

Sensation to pain is abolished, or at least diminished. This is also seen in hysterical coma. If, however, the hypnotized person is told that he is hurt he will exhibit all the signs of pain. It is important to distinguish between tactile sensibility and the sensation of pain. Before these were shown to be physiologically distinct it was regarded as a proof that analgesia was simulated because the sense of touch was unaffected.

So marked is the analgesia that surgical operations have been performed on patients in the hypnotic state.

It is not surprising that the marked insensibility to pain characteristic of this state should have attracted the attention of surgeons, especially before anæsthetics were known, as affording a possible immunity from pain in surgical operations. The first to invite attention to this aspect of hypnotism was M. Cloquet, a famous French surgeon. In 1829 he published an account of a severe operation performed by him upon a woman in this condition entirely without pain.* About 1841 two amputations were performed in England;* soon after, Dr. Esdaile, in Calcutta, detailed numerous severe and tedious operations performed by him without inflicting* suffering upon natives in the state of mesmeric sleep. In In 1859 Velpeau and Broca performed surgical operations upon twenty-four women in the hypnotic state induced by Braid's method†.

October 30, 1885, a woman was painlessly delivered in the hypnotic state in Karl Braun's obstetrical wards. Two other cases in the same clinic were successful, but to a less marked extent.‡

Maudsley† is authority for the statement that the hypnotic will

*Carpenter, Mesmerism, Spiritualism, etc. P. 14.
†Maudsley, Phys. and Path. of Mind. P. 52.
‡*Wiener Medizinische, Wochenschrift*, No. 45. *Buffalo Medical and Surgical Journal*, February, '86.

not usually do a criminal or indecent act, as the shock of the suggestion arouses the latent mental functions.

It is difficult to see the force of this explanation of the fact, if it be a fact, in view of the detailed accounts of many surgical operations performed in this state. That the shock to the latent mental functions of the preparations for an amputation and its actual performance should be less efficient than the suggestion of crime or indecency is hardly credible. And the report of the commission of the French Academy, already quoted, indicates clearly that immoral practices had even then arisen from the practice of mesmerism.

If Maudsley's statement of fact is accurate it is necessary to seek some other explanation than the one he offers.

The muscular sense is usually exalted as in somnambulism, and is often the source of the automatism exhibited. The hands being placed in the position of rowing, or pulling at a rope, or climbing a ladder, will induce the movements characteristic of the act.

The special senses exhibit interesting features. The sense of smell, or of taste, may be annulled or exalted to a wonderful degree. Cases are reported in which the hypnotic has returned handkerchiefs, pencils, penknives, etc., to their proper owners, guided only by the sense of smell. Ammonia, snuff, etc., often fail to produce their well-known effects upon the olfactory nerves. But this sense, like that of taste, is largely dependent upon the action of the imagination; and persons hypnotized smell any odor or taste any flavor suggested by the operator. Sight, in like manner, seems to be largely at the beck of suggestion. From the dilatation of the pupils it is certain that vision must be more or less interfered with; and many of the instances cited of apparent vision may be accounted for by the exaltation of the muscular sense as in somnambulism. Moreover, hallucinations of sight, not willed or suggested by the operator, often occur. The frequent reports of seeing vicariously with the back of the head or other portions of the anatomy, of reading through opaque objects, of reporting correctly the contents of a sealed box, or describing the contents of a distant room, are probably nothing but trickery, and are to be placed in the same category with those clairvoyant investigations of the interior of patients' bodies to determine their maladies. If there be any truth

in these pretensions what a marvelous aid in diagnosis it would afford to the physician trained to recognize diseased organs when he sees them to be thus able to make a sort of *ante mortem* autopsy.

As to other mental states in this condition it is interesting to observe that consciousness may not always be abolished. It is when it is still active, although maybe in a lessened degree, that the wonderful phenomenon of duplicate consciousness is observed; the conscious self watching the movements of the other self as an interested spectator merely. Dr. Bastian* expresses wonder that we are not always conscious of a dual being, the two halves of our brain presenting, as they do, marked differences in their convolutions on either side.

This double consciousness is sometimes seen in insanity, and may be induced by drugs. Some remarkable instances of its occurence are related; one, of a medical man, who, under the influence of cannabis indica, put himself to bed and delivered himself of a fine boy; another, related by Tuke, of a physician who performed a *post mortem* upon his duplicate self, saw his own calvarium removed, revealing no brain at all but only a bag of miserable membranes, and realized, for the first time, "what a swindle he had been all his life."

Volition is abolished or held in abeyance. The subject does things which would be very disagreeable to do in his normal condition. Thus Heidenhain caused his brother to drink ink for beer, thrust his hand into a flame, and finally compelled him to cut off his own whiskers, assiduously cultivated for a year, at which, on awakening, he was greatly enraged.

Memory is usually absent, but may be present and even exalted. The subject often recalls, in a subsequent sleep, the acts of a previous one. Introduced to persons during hypnosis he does not recognize them on awaking, but may do so on falling into the mesmeric sleep again. In this as in many other particulars induced somnambulism (hypnosis) is the counterpart of the natural form.

The chief points relative to the mental condition are summed up by Tuke† nearly as follows:

1. Consciousness may be present or absent.

*The Brain as an Organ of Mind.
†Sleep-walking and Hypnotism. P. 100.

2. Volition is suspended.

3. Reflex action of the cerebral cortex is manifested so long as there is any channel of communication to suggestions from without.

4. If consciousness is present the perception of reflex or automatic cerebral action conveys the idea of two egos (double consciousness).

5. Some of the mental functions, as volition, and usually memory or sensation, may be absent; others may be depressed or exalted, as the special senses, and sometimes sensation and memory; hallucinations and delusions may exist, and even continue for a time after awaking.

6. Unconscious reflex mimicry may be the only mental phenomenon present.

7. External impressions may be cut off in the encephalon according to the areas affected and the completeness of the hypnosis.

Jenny Lind, when singing at Manchester, was invited by Mr. Braid to witness the performance of one of his subjects, an illiterate factory girl, who possessed an excellent voice and ear, but had received no musical education. She followed the Swedish Nightingale in songs in different languages instantaneously and correctly, even to the rendering of a long and elaborate chromatic exercise, giving "both words and music," says Mr. Braid, "so simultaneously and correctly that several persons present could not discriminate whether there were two voices or only one."

The claim that persons have been known to converse in the mesmeric state in languages they have never learned, like the servant of Harriet Martineau, have been proved fallacious. They can, on the test, only imitate the sounds they hear, and have not the power either to understand or to frame answers to questions in a tongue to them unknown.

The feats of muscular strength, often witnessed in the hypnotic, seem to be clearly explicable on the theory of a "predominant idea" or mental concentration. Certain it is that they have their analogies in the experiences of every day life. What is more common, for example, than to hear of some one performing, under excitement, some feat of strength of which he is ordinarily incapable? Inspired by

the flames of burning Troy, Æneas bears away upon his shoulders his father, the aged Anchises—no light weight if we may credit the artistic representations of the transaction as depicted in ancient art. Under a like stimulus an aged housemaid lifts and carries to a place of safety an immense box, containing her worldly possessions, which she is unable to raise an inch after the excitement has passed. So in times of great imminent danger we put forth an energy unparalleled in our usual experiences. Our minds are concentrated on the one idea of safety. Reason is for the time being inhibited, and to a considerable extent the will and judgment also. Now this predominent idea may be simply an expectancy of something about to happen. The hypnotized knows not what, but is expecting something to occur. His mind is fixed on this idea; and his reason being in abeyance, his will ready to obey any suggestion from without, he readily accomplishes marvelous feats. Mr. Braid assures his subject, a man of feeble physique, that he can lift a weight of twenty-eight pounds with his little finger. "It will go up like a feather," he asserts, and straightway it is in the air and swung lightly about the subject's head. Neither Mr. Braid nor his son could do the like, and Dr. Carpenter, who cites the case, could barely lift the weight with his little finger.

The writer recalls a simple experiment of which a fellow student was the subject. He lay full length upon the floor with two students on either side, just touching his person with the extended fingers. Several deep respirations were taken in concert, and at a given signal an effort was made to lift our subject upon the tips of our outstretched fingers. To our awed surprise he went up "like a feather" to a height of two or three feet from the floor, when, probably from some element of incredulity in the environment he came down "like a gob of mud," to use Mark Twain's classic and expressive simile. Probably no one expected success, even to this extent, but our minds for the time being, were concentrated upon the experiment, although expecting it to fail. Faith that it would succeed might have realized a phenomenon parallel to the aërial flights of those holy ecstatics of old, or of Simon the Sorcerer, who in sight of a multitude floated in the air, and was only brought back to earth by the exorcising prayers of the two apostles, Peter and

Paul; or some similar hallucination inspired by faith, so common even in these later days. A banjo floats in the air about a room; its place designated by the music struck by spirit hands; a table rises and circles gracefully about the medium's head; hundreds of the most solemn people attest that they saw a medium (Mr. Home) borne out of one window and in at another; while more wonderful still, a female medium, Mrs. Guppy Volckmann, is carried through the air for several blocks and plumps down on a table in a room with doors and windows closed and fastened. The writer has been one of four men trying to hold down a piano while the medium standing so that she could just touch the keys declared our inability to do so. The diabolical instrument at once reared on its back legs and rose and fell in time with the music, carrying our combined weight with it. Probably fifty people witnessed this. At least two of the four men were utterly sceptical, not only as to the agency of spirits in the matter, but as to the possibility of its being done at all. In this case the important element of faith was absent in at least a portion of the parties concerned. Maudsley would explain this as an hallucination of motion, such as the whirling of a room around one suffering an attack of vertigo or the apparant motion of the stationary train of cars when we whirl by them; an hallucination on the part of the witnesses as well as of the participants. This explanation seems hardly satisfactory. It would certainly hold good in many cases where participants and beholders were alike strong in the faith that the deeds promised could be accomplished. But Maudsley himself speaks of the influence of an investigating and sceptical element in the surroundings as usually preventing the occurrence of the phenomena. Is it less marvelous that the operator should inspire with the same motor hallucination fifty people, some of them known to be sceptical, than that the alleged, occurrence actually took place through some other unknown agency? Is Carpenter right when he states that all that is genuine in mesmerism or spiritualism has been accounted for by well ascertained physical principles?

Would it not be safer to assert that excluding fraudulent manifestations, so much of these phenomena has been explained by known physiological and psychic laws as to make it reasonable to

suppose that they all may be thus explained as our knowledge of our mental processes becomes more complete? And may not an observation of these phenomena afford a fuller knowledge of the mental operations in other states, and thus lead to their own solution? Or, what is more practically valuable, perhaps, may not their investigation result in a better understanding of the manifestations of mental disease?

DOUBLE DISLOCATION OF THE JAW, FROM VOMITING.

BY ELMER E. CURTIS, M. D.
Rochester, N. Y.

On August 1, 1886, I was called to see Miss K., whom I found suffering from gastro-enteritis of two weeks standing. I found her much weakened and emaciated; prescribed for her, and in the evening was informed that she felt much better. On the following morning she felt so much improved that she, contrary to my instructions, indulged in a glass of beer, which produced a violent paroxysm of vomiting. I was summoned in great haste and informed that "*Mary* (my patient) *had vomited her jaw out.*" I found to my great surprise that she had produced double dislocation of the jaw, which I reduced with some difficulty. I report this occurrence because it seems to me to possess unusual interest, both in the manner of its production, and from the fact that both sides were dislocated, instead of but one, as is generally the case.

SOME of the best of examination stories are those told of answers actually on record by her Majesty's inspectors of schools, and other official persons, regarding especially the tests applied for the pupils' knowledge in the "specific subjects" in a public school within the metropolitan area. The specific subject selected was physiology; and the answers, which are vouched for as genuine, will be interesting reading to those who are seeking to popularize physiological and anatomical knowledge. To the question, "Describe the process of digestion," one of the children "presented" in physiology replied in this wise:

"Food is digested by the action of the lungs. Digestion is

brought on by the lungs having something the matter with them. The food then passes through your windpipe to the pores, and passes off your body by evaporation, through a lot of little holes in your skin called capillaries. The food is nourished in the stomach. If you were to eat any thing hard, you would not be able to digest it; and the consequence would be, you would have indigestion. The gall-bladder throws off juice from the food which passes through it. We call the kidneys the bread-basket because it is where all the bread goes to. They lay up concealed by the heart."

Domestic economy as nowadays taught to "children of the elementary school class," embraces a deal of physiological knowledge, or, rather, jargon. It is a subject which affords hosts of amusing answers. Thus, in reply to the question, "Why do we cook our food?" one fifth-standard girl gives the delightfully inconsequent reply, "Their are five ways of cooking potatoes. We should die if we eat our food roar." Another girl writes, "The function of food is to do its proper work in the body. Its proper work is to well masticate the food; and it goes through without dropping, instead of being pushed down by the skin." A third pupil puts in her paper that "food is digested when we put it into our mouths, our teeth chews it, and our tongue roll it down into our body. We should not eat so much bone-making foods as flesh-forming and warmth-giving foods; for, if we did, we would have too many bones, and that would make us look funny."

On the subject of ventilation, one student informs us that a room should be kept at ninety in the winter by a fire, and in the summer by a thermometer; while a classmate writes, "A thermometer is an instrument used to let out the heat when it is going to be cold." Another girl sets down, "When roasting a piece of beef, place it in front of a brisk fire, so as to congratulate the outside."—*All the Year Round.*

Detection of Blood in the Urine.—M. A. Zuchini proposes the following method for determining the presence of blood in the urine. One drop of acetic acid and forty-five minims of chloroform are added to the two and one-half drachms of the suspected urine: The phial is to be well shaken and then set aside to stand for a time. If the urine contain blood the chloroform, which settles to the bottom, will have a reddish tint, the depth of which will vary according to the amount of blood present.—*Eastern Medical Journal.*

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BUFFALO, N. Y., OCTOBER, 1886.

THE THIRTY-FIFTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The thirty-fifth annual meeting of the American Association for the Advancement of Science fully maintained its usual standard of excellence. Each section was well attended by such of the scientific public as could be present, and a gratifying amount of interest was evinced over the papers read and discussed. To physicians the Biological Section naturally presented the most attractions, and those who attended were treated to every variety of subject belonging under this comprehensive head. Vice-President Bowditch opened the section by considering "What is Nerve Force?" taking up in turn the kinetic and discharging theories, but inclining toward the former. Especial prominence was given to the question of contagious diseases, and their prevention by inoculation with their bacterial products. In this connection Dr. Salmon, of Washington, presented a paper in which he advanced the theory that immunity from second attacks of contagious diseases is due to the fact that the tissues acquire a tolerance for the germ so as to be no longer affected by it, just as they become habituated to the effects of tobacco, opium and other poisonous agents. This theory he supported by giving the details of a large number of experiments made by himself. Space forbids even a brief synopsis of the admirable

papers of Drs. Minot, Wilder, Prof. Cope and others in their respective departments; each was replete with instruction and presented in a clear and scholarly manner.

It was a matter of regret to us that so few of the medical profession of Buffalo attended these meetings. Are physicians here less interested in general science than elsewhere? or, are they more occupied with professional duties than physicians of other places? Hardly the latter, we think.

In every hamlet, town or city, where exists a scientific society there shall we find, as a goodly proportion of its numbers, physicians taking an active and prominent part in the work of the same. This statement is confirmed in the case of a national body like the American Association for the Advancement of Science, which draws its members from all parts of the United States. An examination of the directory of the Association gives us the following figures:

Fellows, ...	661	Members, . . .	1,447
Physicians, ...	77 (11½%)	Physicians, . . .	203 (14%)
Total memberships, ...			2,108
Physicians, ...			280 (13.2%)

To this number we believe 6% could be safely added as expressing the number of physicians interested in some scientific study other than medicine, but who for various reasons are not members of the Association. Gratifying as is the quantity 13%, the quantity 11½% is equally so. By this latter we mean the percentage of physicians among the Fellows, or those who have attained more than ordinary distinction in their respective scientific work. This, in our opinion, is an excellent showing, and the more to be wondered at as a good many of the Medical Fellows are not professors in medical colleges, and have "won their spurs" in other fields than medicine.

It would have been interesting to have compared the medical with other professions, but this we could not do, excepting in the case of the clergy, owing to the lack of titles destinctive of a profession, in connection with the names given in the directory. Among the 2,108 members only fifty-two were clergymen, of which fifteen were Fellows, and thirty-seven were ordinary members. This is not to the credit of a profession so many of whose numbers have an excellent education, trained minds and abundant opportunity to render important services to science. However, until that

liberal and progressive spirit which characterized such clergymen as Kingsley, Maurice and others, shall have permeated the whole clerical profession, we can hardly expect more. Let it be hoped that in the future the members of every profession will evince increasing interest in general science, gaining that catholic spirit and truly religious nature which such study begets.

THE STATE IN LOCO PARENTIS.

The thirteenth annual National Conference of Charities and Correction, was held in St. Paul during July. At one of its meetings Hon. Wm. P. Letchworth, whose name is so well known in connection with our State charities, delivered a masterly address in which, among other things, he considered the obligation of the State in the case of its destitute, physically unfortunate and criminal children. His remarks upon this subject were so humane and significant that we make no apology for quoting some of them, feeling that the subject is of interest to every physician.

The security afforded by the parental relation is necessary to the well-being and proper development of the child; and when, from any cause, it is left without protection, the State, reflecting the magnanimity of the citizen, stands *in loco parentis*, and assumes the obligations of the parent. This responsibility may be exercised directly, or it may be delegated to benevolent societies or to individuals. In any case, the broad ægis of the State is extended over the weak and helpless little one, and it has a powerful protector.

The whole number of children in the United States, under sixteen years of age, is given as 20,043,659; but we are unable to determine what proportion of these are dependent or delinquent, nor can we definitely decide how far the different States discharge their duty toward dependent and offending youth. According to the census of 1880, there were in the United States 48,928 blind persons, of whom 2,242 were in educational institutions other than day schools, and 32,878 deaf-mutes, of whom 5,393 were in similar institutions. The New England States, having a population of 4,341 blind persons, had only one public institution for their instruction. This contained nine-six inmates, and receives pupils from other States. New Hampshire and Vermont had no institutions for deaf-mutes. There were no schools for the blind nor for deaf-mutes in New Jersey, Delaware, Florida, nor Nevada. The total number of idiots in the United States was 76,895. Of these, 2,429 were in training schools for the feeble-minded. Just what percentage of this classs should receive public instruction cannot be estimated. It would seem, however, that the proportion under institutional instruction is small.

COLLEGE OPENINGS.

The forty-first session of the Medical Department of the University of Buffalo was opened September 21, with a larger attendance at the commencement of the term than has been known in the history of the college. The introductory lecture by Dr. F. W. Hinkel was devoted to an entertaining history of the special branch which he has been elected to teach, and will be found among our previous pages. The improvements made since the close of the last session have already been announced.

The new College of Pharmacy opened most auspiciously September 20. The Chancellor of the University formally presented the charter of the new school to the Dean of the Department of Pharmacy, who received it with words expressive of his recognition of the importance and dignity of the institution thus constituted. A very interesting address was delivered by Mr. C. W. Holmes, of Elmira, Secretary of the State Pharmaceutical Association, which we expect to print in next month's issue, since it presented many points of interest alike to physician and pharmacist. The response from the faculty was made by Prof. Vandenbergh who spoke in a happy vein of the issues which he and his colleagues had so deeply at heart. Suitable acknowledgment was made of the assistance rendered by a few of Buffalo's generous citizens, and a most hearty welcome extended to the first class.

* * *

Some statistics as to the number of homœopathic practitioners abroad will doubtless make an interesting item. It seems that at the last *International Homœopathic Convention* held at Basle, Switzerland, in August, the president delivered an address in which he took up the present status of the faithful. Some idea of their foreign status may be gleaned from the fact that there were *forty* members present, of whom nine were from this country. He was followed by a gentleman who furnished the statistics which we summarize as follows: In Belgium, in five years, there has been very little increase; there are about sixty practitioners of the school. In Great Britain affairs have retrograded; their school has been abandoned for lack of students, the leading journal discontinued, and the number of practitioners diminished.

There are about seventy homœopathic physicians in Paris, and one hundred and thirty in the east of France. It "is not unknown in the French colonies." There have been "a few accessions of young men, but not in proportion to the demand." In Italy there are fifty-five practitioners. "There is no animosity between allopaths and homœopaths in Italy." In Russia there are at least four homœopathic doctors. Dr. Bojanus is convinced that their institutions can only flourish where they are entirely independent, as in North America. Spain holds one hundred and thirty-seven practitioners of the school, and Switzerland twenty-three.

It will not be forgotten that each of these countries has a government so far parental or patriarchal as to compel its practitioners of medicine to pass a rigorous examination, one calculated to weed out the ignorant and uneducated. Every man is free to practice what he chooses, but this ordeal he *must* pass. Compare this relation of government examination, in countries so sparsely infected with homœopaths, with our own entire lack of such tests and our plethora of ten thousand homœopathic physicians. The inference to be drawn from these facts and figures is so plain that it does not need rehearsing. We do not wonder that some of the faithful forty were "saddened by the report" from their own side of the water.

* * *

Apropos to the above we have unearthed a most valuable therapeutic hint from the *Hahnemannian Monthly*, which contained the sources of our statistical information just given. It will doubtless create a furore among a certain class of practitioners to know that for leucorrhœa *aggravated before full moon* lycopodium is *the* remedy.

* * *

In the report of the Buffalo City Society meeting in our last number (p. 557) Dr. Hartwig's attempt at sub-cutaneous drainage in a case of ascites was made to appear in unfavorable light, since the statement that he had resorted to it was immediately followed by one giving the *post mortem* disclosures. It seems that after a week œdema had subsided, and the patient lived a month longer in comparative comfort. This seems to show that such efforts at tissue drainage are well worthy of fair trial, and the doctor certainly deserves the credit attaching to success in this direction.

LARGE VESICAL CALCULUS.—Mr. Thomas Smith reports in *The Lancet* of August 7th, the removal by the supra-pubic method of a stone weighing 24.5 ounces. It was ovoid, and measured in its largest diameter 13 inches, in its smallest 9½. In was composed of a nucleus of oxalates covered with phosphates. The patient was forty-three years old, and completely recovered.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, September 7, 1886.

Reported by Charles G. Steele, M. D.

The president, Dr. W. W. Potter, occupied the chair.

The secretary announced that he had been unable to secure a paper for the evening.

Under the head of voluntary communications, Dr. De Lancy Rochester showed a greatly hypertrophied turbinated bone, which he had removed with the Jarvis snare.

Dr. M. Hartwig cited several interesting cases which had occurred in his practice. The first was that of a boy, eight years of age, who has always enjoyed fair health. About two weeks ago he was troubled with wry neck, the attacks coming on at five o'clock each day and continuing into the evening. After the night's sleep the wry neck disappeared. After this had continued four days, Dr. Hartwig diagnosed intermittent fever and gave ten grains of quinine a short time before the expected attack. Since that time the boy has had no trouble. There were no other symptoms of intermittent fever.

Case 2.—A man with a so-called cataract consulted Dr: Hartwig. The doctor, after looking the case over carefully, decided that the eye trouble was due to some constitutional disturbance. The urine was examined and a considerable amount of sugar found in it.

Case 3.—That of a young man who had syphilis without marked initial lesions. A week after coitus a very small vesicular point was seen on the penis, but it rapidly disappeared. About six weeks after the man had persistent sore throat, and in a few days his hair began falling out, and the lymphatics enlarged.

Case 4.—Dr. Hartwig was called in consultation to a labor case, by Dr. Bode. The os was very rigid and was only dilated to the size of a silver dollar. After waiting some time an incision about an inch long was made in the uterus, anteriorly, and another one and one-half inches in length, posteriorly. The forceps were then applied and the child delivered. When traction was being made a portion of the uterus could be seen at the vulva, and Dr. Hartwig was compelled to press it back.

Case 5.—A young woman was afflicted with salivation without any perceivable cause. Belladonna tincture, painted inside the mouth, was the only one of many remedies tried that affected the flow, but it did not entirely cease under this treatment. An old woman finally told the patient to chew tolu gum and she was cured in short order.

Dr. Hartwig also said a few words regarding the use of phosphorus in the treatment of rachitis. He has used it, in conjunction with cod-liver oil, with remarkable results.

Dr. W. W. Potter read a short but interesting paper on "The Use and Abuse of Pessaries." Dr. Potter held that a pessary should not be introduced until the pelvic tissues have been properly treated, so that the uterus can be readily replaced. He advocated the use of medicated pledgets of cotton, which could be left in the vagina forty-eight hours. When replacing the uterus, in retro-displacements, Dr. Potter always placed the woman in the knee-chest position, which allowed the abdominal contents to gravitate forward. The pessary should not be forced into place, but should be gently pressed. After it is in position, it must be watched, as it may injure the soft parts. In ante displacements Dr. Potter found the use of the stem pessary most satisfactory.

The paper was briefly discussed by Drs. Hartwig, Bartlett and Grosvenor.

Prevailing diseases reported were the usual summer diarrhœal complaints and typhoid. Dr. Bartlett said there were less exanthematous diseases at present in Buffalo than ever before seen in his practice.

The meeting adjourned.

It was announced that Dr. Roswell Park would read a paper on "Tubercular Disease of Bones" at the October meeting.

McKEAN COUNTY MEDICAL SOCIETY.

Reported by Dr. J. R. McCartey, Secretary.

The Society met at Bradford, August 3. The president, Dr. Dorn, in the chair.

A paper was read by Dr. Canfield, on "Ergot as an Oxytocic." After giving its history and describing it, he said it had been guilty of audacious crime; had often unwittingly jeopardized the lives of the unborn, and by undue activity has seriously injured thousands of mothers. On the other hand, the inestimable good it has done, in preventing post partum hemorrhage, and in inducing proper involution, can never be accurately estimated. In miscarriages his custom was, before viability, if the os was dilated sufficiently to receive the finger, pains regular and severe, and the woman flowing, to give thirty to sixty minims of the extract of ergot, tampon the vagina and watch the results. In normal labors, when he did not give ergot, it was because he forgot it. The time of giving it varied, according to circumstances; ordinarily he did not give it until after the birth of the child, and before the expulsion of the placenta. In inertia he sometimes combined it with quinine or with nux vomica. Occasionally he combined it with chloral, with the bromides or with opium. It had apparently been the fashion lately to cry down ergot. He did not think we should lose sight of its usefulness because it had done harm; he had never seen it do harm when judiciously used, but had seen it do an inestimable amount of good. He felt that if he were obliged to give it up he would want to throw up the practice of obstetrics altogether.

In discussion, Dr. Shoemaker said that he had never heard anyone express his sentiments as exactly as had Dr. Canfield; he always gave it except when he forgot it.

Dr. Benninghoff said that while he did not give it as invariably as did the essayist, it was in his opinion a valuable remedy, and a necessary one. In small doses it gave strength to the pains, and did not interfere with their intermittency. In his experience, it was only in large doses that it produced a continuous contraction, without intermission. Given in the last stage it would prevent post partum hemorrhage and prevent after-pains. There were no

after-pains where the contraction was continuous; they occurred only when there were intermittent contractions, consequently ergot controlled or prevented them. It also would assist in involution.

Dr. Straight said that even in large doses he considered the effects of ergot to be intermittent, and as a rule not continuous.

Dr. McCartey said he never gave ergot in normal labors. In inertia he gave it in small doses combined with quinine or with nux vomica. He was careful to not give enough to produce a continuous effect; would always give it when he had reason to suspect there might be post partum hemorrhage. He invariably gave it when pains came on suddenly with a scream, lasting a few moments, and then subsiding as suddenly, followed by complete relaxation. He had learned to his cost, that such symptoms were followed by post partum hemorrhage

Dr. Roswell Park, of Buffalo, was elected an honorary member of this society; and was invited to read a paper before its members at his earliest convenience.

Meeting of September 7th.

The President, Dr. Dorn, in the chair.

Dr. Roswell Park, of Buffalo, who was present by invitation, gave an address on "The Pathology of Suppuration, and the Rôle of Micro-Organisms in Causing Blood Poisoning." He said, that while this subject was of special interest to the surgeon, it might be considered to be of equal interest to the general practitioner, since it is believed that many general, as well as most surgical diseases, are caused by living germs. The relation of bacteria to suppuration is now looked upon by advanced thinkers as one of cause and effect; and it is expected that the future advance of surgery will be more in the line of pathalogical research than in anything else, for operative surgery is now well understood, and but little more can be accomplished without more pathological light. True, we may yet expect to resect the prostate and perform a few other operations which heretofore have been unsuccessful; but, generally speaking, there is not much left in this field, as it is now understood. We must now make progress in the way of prevention. Surgical pathology calls for a great deal of study. The old notions

of inflammation and of suppuration are well known; suppuration was a frequent result, and pus was considered a natural consequence of many operations. Pus was called dead or dying blastema, which, for the time, was a very good definition. It is difficult to tell exactly what pus is. It owes its origin to the presence of micro-organisms, and without them there is no pus. Where pus is there are always bacteria; where pyogenic bacteria are found there always is or will be pus. So much has of late been added to our knowledge of bacteria that we may say that the text-books on the pathology will ere long have to be re-written.

Investigators have been making experiments to learn if pus could be formed without bacteria. Small glass tubes were filled with chemicals; some with croton oil or turpentine, some with sulphuric acid, others with other chemicals, and hermetically sealed. They were next thoroughly asepticized, and then, with every antiseptic precaution, were inserted under the skin. After the wound had fully healed, the tube was broken by a blow and the irritant set free. As a rule no pus formed, though sometimes there was a little. Then the inquiry was made as to whether it was the result of the irritation or the fault of the manipulation. Further experiments proved that it did not come from the irritation, for in forty experiments, thirty-nine times there was no pus, and in the fortieth one there was but little, and on examination a line of bacteria was found from the outside of the skin to the seat of the irritation. These investigations, made with such care, prove that without bacteria there is no pus; that where there are no bacteria there is no pus, and that bacteria are prime factors in causation of pus. These experiments were made by Ogston, Orth, Councilman, Scheurlen, Rosenbach and Passet.

Some hold that all diseases are caused by living germs; others, opposing them, say that all diseases are caused by chemical poisons, formed either within the body or without, but often within. The poisons formed within the body are so-called ptomaïnes and leucomaïnes. They are alkaloids, and they produce symptoms according to their kind. The advocates of the chemical theory claim that bacteria, when found, are simply adventitious, and not a necessary factor in the production of disease. There has been violent opposition

between these two schools, and yet there is no real conflict between them, for the two theories can be reconciled. Fermentation and putrefaction are common terms. Fermentation comes from the action of micro-organisms, usually on vegetable cells, and is not commonly accompanied by an unpleasant smell. Putrefaction is the result of the action of bacteria, usually on animal matter, and is almost invariably made evident by foul odors. Ptomaïnes are the products of putrefactive change, and they all have toxic effects. Leucomaïnes are the products of change in albuminoid substances, and are found in the intestinal canal; they are intermediate between peptones and urea, and are to be found even among the regular products of digestion. The stomach does not absorb them, so they are carried to the liver, where they are destroyed. Leucomaïnes may be thought to be formed without bacteria, but the digestive canal is filled with bacteria, and they are more frequently found when there is indigestion. Much of the unpleasant torpor, nausea or discomfort felt after a hearty meal, comes from the presence of leucomaïnes which have failed of destruction in passing through the liver. One may have the same symptoms after eating putrid meat or oysters; there may be nausea, pain, or even catharsis. It is an intestinal toxæmia, and is analogous to acetonuria, cholesteræmia and uræmia. Ptomaïnes are putrefactive alkaloids, and cannot be formed without bacteria; they are the products of bacteria. Canned meat, when it fails to keep, and spoiled sausage, contain them, and there are wholesale poisonings from them. The poison found in cheese and in ice cream is a ptomaïne, has been differentiated, and is called tyrotoxicon. These products are well-known; they are not simply theoretical. Open a can of meat, and leave it until there are putrefactive changes, and ptomaïnes will be found. When bacteria are rigidly excluded, there is no putrefaction, and there are no ptomaïnes. Bacteria always precede putrefaction, and ptomaïnes follow. Exclude bacteria perfectly, and no change will take place. Beef tea has been placed in tubes and hermetically sealed, so as to exclude bacteria, and years have passed without change. On opening the tube the substance would then putrefy just as it would have done in the beginning, if the bacteria had not been excluded.

Bacteria are vegetable cells, and generate poisons, which prove to be alkaloids. Strychnia is an alkaloid formed also by vegetable cells, so are morphia and atropia; it is thus evident that violent poisons may be formed by apparently innocent cells. Take pure cultures of bacteria, and grow them in large quantities under favorable conditions and it will be found that alkaloids will be produced; separate these alkaloids from the bacteria and inject them into the tissues, and the violent symptoms will ensue. The bacteria alone or the ptomaïne alone would produce the same symptoms. It is evident that the ptomaïne is the product of the bacteria, and that this product is what produces the toxic effects. Some of the ptomaïnes are in liquid form, some solid, and some of them volatile; some in their effects will be narcotic, others paralyzant, others emetic or cathartic; and from this it can be understood how their effects will simulate diseases, or produce them. In regard to blood poisoning bacteria may act in two ways; primarily as irritants and secondarily as generators of poisons, or they may act in both ways. The bacillus tuberculosis acts mechanically. It flows through the blood until it lodges in some crevices in the tissues, and there it reproduces itself, and finally obstructs the circulation of the part, and caseous degeneration often follows. Probably, also, it will generate the poison which produces the general symptoms of hectic, etc. In anthrax they act principally in a mechanical way; they dam up the circulation so completely that there is death of the part.

The varieties and degrees of "blood-poisoning" may be classed as sapræmia, septicæmia and pyæmia. In sapræmia only the toxic effect, the ptomaïne poisoning is noted. In septicæmia the microbes find their way to the immediately adjoining tissues where they cause not only a sapræmia but more or less local destruction. In pyæmia, an infected clot, in a vein, putrefies and breaks down, its fragments are carried through the venous circulation to the right side of the heart and then to the lungs; fragments of the clot will lodge here and form minute abscesses, and soon the infectious material gains access to the arterial circulation, whence it is generally distributed, and we thus have our metastatic abscesses, plus a violent and fatal general ptomaïne poisoning.

Erysipelas is generally ushered in with a chill, *i. e.*, a sign of

poisoning, followed by local signs. The bacteria block up the vessels and then follow redness, œdema and local destructive changes.

After the address the Society dispersed for a short time to subsequently gather at the Option House, where an elegant supper was laid, which was discussed so earnestly that it is feared the livers of some of the members were not able to dispose of all the læcomaïnes generated.

Book Reviews.

SPINAL IRRITATION. By Wm. A. Hammond, M. D. The Physician's Leisure Library. Published by Geo. S. Davis. Detroit.

In this brochure of eighty pages Dr. Hammond makes a very strong argument that spinal irritation is, in effect, posterior spinal anæmia; an argument so strong that for our part we are compelled to agree with him. After discussing the history of our knowledge of the subject, he considers in turn its causes, symptoms, diagnosis, pathology and treatment. Its diagnosis he makes quite clear, and it is a pleasure to find that its treatment is, as a rule, neither complicated nor unsatisfactory. The author has evidently changed his views with regard to the efficacy of galvanism in these cases, and he now gives counter-irritants the first place in importance, next to which he ranks static electricity.

Spinal irritation seems to be a modern disease with an identity of its own, and it is a pleasure to meet with such a readable and instructive essay concerning it.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Vol. III., Fac to Hys. 813 pages. Illustrated by 6 chromo-lithographs and 718 fine wood engavings. Edited by Albert H. Buck, M. D. New York: Wm. Wood & Co. Buffalo: J. H. Matteson.

This noteworthy work is making hosts of friends wherever its successive volumes appear. The third volume, now before us, seems even more admirable than its predecessors. Among its contributors are Ashhurst, Coe, Councilman, Dana, Fowler, Gibson, Hamilton, Keen, Loomis, Minot, Musser, Naucrede, Parvin, Prudden, Satterthwaite, Senn, Sternberg, Stimson, Van der Veer, Witthaus, and many others whose names are almost as well known.

Among the articles we have been particularly pleased with the following: Dr. Minot, under the caption *Fœtus* gives an exhaustive summary of human embryology, from which a student may glean information which it would take him a long time to glean from other sources. Surgeon Joseph Smith, U. S. A. (who, by the way, was a Buffalo graduate), takes up at length the duties and work of the *Field Surgeon.* Under *Habitations* are found many well-illustrated hints concerning sewers. The physiology and pathology of the *Heart* cover nearly fifty pages. Dr. Freeborn in his article on *Histological Technique* has condensed a whole treatise into a paper worth the whole price of the book. While these are among the more striking articles we have not found a bad one. The illustrations are very excellent, and six plates, in colors, have been introduced. It is a pleasure to note the names of two of the Buffalo faculty among the list of contributors.

This work is certain to prove invaluable to all who possess it.

THE MODERN TREATMENT OF ECZEMA. By H. G. Piffard, M. D. Pp. 54. Same series.

When we remember that the cases of eczema constitute nearly a half of the total number met with in dermatological practice we shall better appreciate the necessity for fuller acquaintance with its varied forms and the help which such an essay as Dr. Piffard's may afford. Brief, without unnecessary verbiage, it is essentially practical, and must prove of great value to all who will devote to it a little time.

BOOKS RECEIVED.

From WM. WOOD & CO., New York: Through J. H. Matteson, Buffalo.

Reference Handbook of the Medical Sciences. Vol. III.

Handbook of General Therapeutics: ZIEMSSEN.

A Treatise on Electrolysis: ROBERT AMORY.

Pathology and Treatment of Rheumatism: T. J. MACLAGAN.

The Healing of Arteries after Ligature: J. C. WARREN.

From Geo. S. Davis, Detroit:

Spinal Irritation: WM. A. HAMMOND.

Modern Treatment of Eczema: H. G. PIFFARD.

NOTICE.

In order to make The Medical Press of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

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To Exchange.—Vols. 2 and 5 of *Science.* Address the Editor.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

The Patient and the Doctor.—A Peasant who was very Ill and expected to Die Promised the Doctor $50 if he saved his Life. A Fortunate turn of the Disease Enabled the Doctor to pull his Patient through, but when he Presented his Bill the Peasant exclaimed:

"What a Monstrous Robbery! I'll never pay it!"

"But you set your own Figures."

"Yes, but any jury will decide that I was too Ill to Transact Business."

MORAL:

Don't Depend upon the Promises of a man down a Well.—*Detroit Free Press.*

Poisonous Reptile and Snake Bites.—The *Jour. Pharm.*, Melbourne, reprints a letter from a German doctor, resident over twenty years in Brazil, in which he says: "Since Dr. Lazerda discovered permanganate of potash to be an infallible antidote, every farmer keeps some of it in his dwelling." In the case of a young negro woman, bitten on the finger by a *Jararaca pregosa*, two hours elapsed before the patient was seen, her arm was enormously swelled and blood was oozing out of her eyes and mouth. One-third grain of permanganate potass. was injected under the skin of the lower arm, and, half an hour after, the same amount in the upper arm; in two days she was at work as usual. The solution, in water, should be made just before using.

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SOAP AS A HYGIENIC REMEDY.*

By Oscar Liebreich, M. D.
Professor of Pharmacology, University of Berlin.

Gentlemen—I would not dare to appear before you with a subject universally so well known, were it not that new features had presented themselves through recent research. They are essentially two: First, the fact that in accordance with my investigations, the view of the function of the skin has been materially changed, and second, the fact that in the manufacture of the soap which we use, alterations have ensued, besides of late, excessive adulterations have occurred; therefore it is a matter of importance, because the method of production itself must render a chemically pure neutral soap.

Here, upon this enlarged chart, I show you a section of the skin, the copy for which was taken from the text-book of Dr. Gustav Behrend. Yonder, you see another drawing, which likewise represents a section made through the skin,showing its organs of secretion. Here, you first observe the papillæ; these other lines may represent the connective tissue. Upon the papillæ are found small cells which, as you see, have a cylindriform arrangement, in fact as far as they lie upon the pars papillaris. Then follows a thicker layer, which originally, as well, was cylindric, but owing to the peculiar position of its upper cells, and the adaptation of the papillæ, with prong-like projections, they at a glance offer more the appearance of prickle-cells, yet are precisely the same and are found nearly in the same stage of development. The overlying layer which I have drawn somewhat darker, was first observed by Langerhans, and

* A paper read before the recent meeting of the German Society of Hygiene of Berlin.

called by him the stratum granulosum. Over this layer is situated another layer of cells, which in comparison to those lying beneath, are extraordinarily clear and transparent and known as the stratum lucidum. There resting upon the stratum lucidum is found the stratum corneum, with its flat, polygonal, horn-like plates. The continuity of this cellular layer is interrupted more or less at various points by organs of secretion and projecting hair,—above all, the sweat-glands,—these where present, always having the characteristic peculiarity of ending in an excretory duct with a tubular gland in the form of a twisted knot. Just so you find these glands in animals. They likewise have the same arrangement. Moreover, you see skin interrupted by an organ which I have represented here. It is a sebaceous gland. In the human organism, these glands seldom discharge their secretion freely upon the surface of the epidermis, yet at times you may find such glands in the scalp, often upon the alæ nasi. Upon the genital organs they also have a free outlet. However, the sebaceous glands of the skin do not directly open upon its surface, but as a rule they communicate with the hair follicles. In observing this relation in connection with the growing hair, we are of the opinion that they are subservient to the process of growth, to oil the hair in order that it may shoot forward more easily out of the follicle, as though it served the purpose of a lubricating-box. They do not secrete in a manner by covering the surface of the epidermis with their oily contents, yet the hair may jut forward slightly oiled by their secretions. They do not part with a free thin fluid as in the case of the sweat-glands. Hitherto the general acceptation has been, that the accumulated secretion upon the exterior of the skin, the so-called skin-grease (Hautschmiere) proceeded from the sudoriparous and sebaceous glands, and that this mixture of dried up sweat and grease overspread its surface as filth. Nevertheless I demonstrated while experimenting with lanoline,* that up to this time the unknown cholesterine-fat as a secretion in human organism was directly derived from the keratinous tissue. The epidermis, also the epidermis of the hair, can direetly secrete a fatty material. It was an accepted fact, according to earlier views, that the formation of fat did not take place in the epidermis.

* Ueber das Lanolin, eine neue Salbengrundlage. Berl. Klin. Wochenschr. 4-7-85.

One imagined that keratinous structures, such as epidermis hairs and nails, simply consisted of the resisting keratin. We now know that fat belongs to this tissue, which is not secreted by glands, but formed within the tissues itself. Dr. Lassar has proven it to be due to a pathological condition, and an excessive secretion of fat can undoubtedly occur. Moreover, the secretion may be considerable in quantity, as, for example, in wool. The epidermis of a spine of a hedge-hog parts with no trifling amount, yet its sebaceous glands are mostly stunted or have perished.

Up to the present time, there is but little known regarding the estimated bulk contained in horny structures. Is is evident that great fluctuations may exist. But important from a hygienic standpoint is the fact, that cholesterine fat or its analogue, is constantly found, though often small in quantity.

Hygienically, in considering the question how to clean the skin, it is but natural that the described relation is of the utmost importance. The skin should undergo a process of cleaning without causing any changes in its chemical or rather its physiological peculiarities. It should remain intact. If there were only a keratin covering to cleanse of products which have settled thereon, then it would not matter much, whether harsh substances were employed, even if its surface were somewhat corroded thereby without doing injury to the deeper layers. However, should we use harsh means we would extract the fat from the horny structures of the hair and the epidermis; the epidermis would become destroyed, at all events most capable of imbibition; the deeper layers, the stratum lucidum and granulosum, and, further on, the cells, would show the disturbed action.

I believe no better instance can be cited, than by recalling the instance of wool-washing, where only the exterior of the horny tissue is most carefully and neatly cleansed, freeing the fatty wool from the natural cholesterine fat; the problem being to cautiously separate the fat from the hair without doing injury to its substance.

I shall pass over the different washing methods; let it suffice that in order to obtain a fine wool a solution of soap is necessary, carefully avoiding a free lye. Even when employing soda, one must proceed in an exceedingly cautious manner, because the wool is very

apt to beeome dry and brittle, making it worthless for spinning. The fat, which is found upon the surface of the wool-hair, is simply to be removed with this procedure of washing.

An excess of lye, or any other harsh chemical, will extract the fat contained in the keratinous tissue, the absence of which would render the wool fragile, and therefore useless. Keeping this point in view, you see, to commence with, that all means of extraction, as æther, and bisulphide of carbon, which certainly dissolve more fat, must be discarded, for the horny structures would be completely lixiviated.

The cleansing of the skin may be considered as nearly analagous. We desire to remove the gathered filth without attacking the epidermis, at all hazards without extracting its natural fat. To accomplish this a neutral soap is of the greatest necessity. The setting free of the actual secretion of the skin should never be thought of. Soap works only as an emulsifying substance. It is a well known fact that if before removing tar from the skin the part is first well annointed with some fat, the soap will emulsify the tar much better.

That a soap should possess perfect neutrality is of the greatest significance, in order to prevent adulteration, or more mildly, the so-called "filling," made by the addition of foreign substances. As the process of saponification is comparatively an easy one, so on the whole but a few chemists have busied themselves with the soap question, and the knowledge gained from the decomposition of fats, belongs mostly to other industries. When fats are used, the process of saponification is essentially a separating of the fatty acids from glycerine and a combination of these fatty acids with alkalies. The process would be still more simple on employing free fatty acids. The difference in the nature and quantity of fats must be regarded. For example, it is a known fact that cocoa oil will saponify in the cold, whereas other fats require warmth. Unfortunately, this peculiarity of cocoa-nut oil has lead to the manufacture of a very inferior soap, the so-called "cold stirred" cocoa soap. This gelatinous mass which is made through the process of saponification, is called soap-lime. Even when comparatively pure fats have been used, it still contains all impurities, and this is especially

true with regard to the unavoidable surplus of lye. Therefore we can readily see why these cocoa and lime soaps, often presenting such a beautiful appearance, belong to the harshest variety. In order to remove the alkali as much as possible, ordinary cooking salt is added to the lime, whereby the soap is separated and further utilized as curd. Nevertheless, by this method, there remains in the spent-lye the greater portion of impurities or nigre; yet in the majority of cases, the curd will contain lye inclosed. Moreover, I should state that according to the usual method the quantity of salt added to the cocoa lime is almost unlimited. Mixed soaps are produced in this manner by dissolving the curd in lime. All soaps in solution are cast in moulds and on cooling are cut into the so-called bars or rails.

In harmony with these methods for the production of soda-soaps, the pharmacopœia has given directions how to make sapo medicatus. Although the quantity of lye is specified, yet if saponification does not take place, somewhat more should be added.

Notwithstanding that alcohol is now added to facilitate the process of soponification, we obtain, after a sufficient amount of salt has been added to procure a proper grain, a soap which is nothing more or less than neutral.

The best mode for testing the neutrality of the curd-soaps, is to employ corrosive sublimate, but not in the manner as given in the parmaeopœia. Corrosive sublimate should not be mixed with soap in solution. On the contary, a hot solution of corrosive sublimate should be poured on a dry bar of soap with no traces of yellow forming, due to the separation of the yellow oxide of mercury. Naturally, before applying this test, you must be certain that the soap under consideration contains no unsaponified fat. The sapo medicatus procured at several of the apothecary shops did not bear this test.

Concerning the production of the so-called toilet-fat soap (Toilette Fettseifen), the curd is milled, perfumed, colored and pressed into cakes. Yet, due to a whole line of incidents, the results always differ, even if the directions for their manufacture be accurately given. Then, too, it may possibly happen that the soap turns out accidentally neutral, but generally it is alkaline and the

degree of alkalinity varies. Therefore, I adhere to the opinion of Campbell Morfit,* who says that by the usual method of manufacturing soap, the results are seldom uniform.

The soap-boiler, to test the neutrality of the soap, does not, as a rule, employ the corrosive sublimate test, but simply tastes of it. He designates this lye like or alkaline savor by the term "strength." Furthermore, that this test is exceedingly deceptive can easily be demonstrated by the corrosive sublimate reaction.

The short description which I have given for preparing soda-soaps is no longer in vogue. A period for adulteration has taken its stead, which has reached unprecedented dimensions. In vain against this debasement by foreign mixture contends the "Industrieblätter" of Jacobsen, the "Seifenfabrikant" of Dr. Deite, and other journals belonging to this line of business.

There is added to the soap, namely, from 10–40% of resin, silicate of soda, sapolyt, starch, sugar, salt in excess; substances which are either in themselves irritating to the skin, or which are transformed through the action of the natron-lye into harmful products. The cold stirred cocoa soaps are especially "filled up," as the technical expression terms it, in an extravagant manner.

The so-termed transparent glycerine soaps, owe their high degree of alkalinity to an addition of syrup, and, often with no trace of glycerine, are the most injurious to the epidermis. I have convinced myself that several of the English transparent soaps, which are considered good, contain resin and sugar. It would be a Sisyphus task to analyze all these productions, as the representations of the adulterant are constantly changing. A mere glance at the published recipes in journals interested in this industry, shows to what extent it is carried on. Out of 100 parts of normal fat, we obtain in practice a theoretical calculation corresponding to 140–150 parts solid ca. soap containing 35% of water, yet certain soap journals give formulæ leading to entirely different results. According to this class we often receive a body gain of 500. In downright earnestness the following is published:

* "Indeed, so uncertain is the uniformity of results by the usual methods of operating that it seldom happens that any two batches of soap correspond throughout, however great may be the mere practical skill or experience of the manufacturer."—Campbell Morfit, M. D., Prof. of Chemistry.

A practical treatise on the Manufacture of Soaps, by Campbell Morfit, M. D., Prof. of Applied Chemistry.

132.5	Kg.	Tallow,
12.5	"	Cocoanut-oil,
95.0	"	Lye of 140° B.
120.0	"	Silicate of Sodæ,
15.0	"	Sal sodæ,
10.0	"	Flour.

Further as a filling for soft soap is recommended for 2400 Kg.

150	Kg.	Resin,
150	"	Lye of 30° B.
100	"	Carbonic Acid by 2 of 5° B.
100	"	Potato flour,
100	"	Silicate of Soda,
200	"	Impure Lye,
		3200 Kg. profit.

Thus we see for 2400 Kg. of soaps. we have a filling mass of 800.

In 1884, in a lecture on the "Innovation of the Soap Industry," I referred* to fact that the means of saponification could directly be drawn from fruits containing oil. This method was originally intended for application in the colonies. But as it directly tends to the formation of a neutral soap-curd, therefore it is also of value for home manufacture. Here I shall naturally pass over the technical advantages which this method offers.

Concerning the process itself, the fruits in a milled condition are saponified in large kettles and the soap-lime separated from the cellulose by centrifugation. If salt be added to the lime in excess, you will obtain a curd which in itself is worthless. It will crumble, and for this reason it must undergo a second process of a hot centrifugation, which separates the curd from the spent-lye. This process will enable us to saponify the ordinary fats with fruits, and in this manner we procure precisely the same products, which have been found most suitable as bases for toilet soaps. This double process of centrifugation excludes every trace of lye, as is shown by the corrosive sublimate test. I believe this method to be the only one which, technically speaking, is certain to lead to the formation of a neutral soap.

The further details of this mode of manufacture have been more fully tested by Mr. G. Heine, of Charlottenburg, and the results obtained have been very satisfactory, even as products for toilet soap. Besides, it was shown that these centrifugated soaps take up fat exceedingly well, thereby rendering the foam softer and more

* Bericht des Vereirs für Gewerbfleiss vom 3, November, 1884.

supple. Of course in the place of the ordinary fats, which turn rancid and sticky, I suggested the use of lanoline which, if pure, will not decompose. This opportunity further demonstrated that medicinal substances could be kept in such a centrifugated soap-curd unchanged. For instance, if thymol or balsamum peruvianum be added to such a curd, the smell will not disappear, but the remedies themselves will remain unmodified on long preservation. Even after keeping them for years, the fracture of a neutral centrifugated soap shows the presence of the volatile oil undecomposed. But on breaking a soap which has an alkaline reaction after a short time, the smell of the oil will disappear, frequently changing into that of rancid fat.

In conformity with my view of the matter, there is hope at hand, that by employing centrifugated toilet soap, a more beneficial hygienic influence would be experienced than by continuing the use of soaps which are alkaline on reaction and often adulterated.

ESTLANDER'S OPERATION.

BY HERMAN MYNTER, M. D.
Attending Surgeon to the Buffalo General Hospital.

[Special Letter to the Editor of THE MEDICAL PRESS.]

My Dear Doctor:—You will remember that the last operation I saw you make in the General Hospital, in Buffalo, before my departure for Europe, was a thoraco-plastic operation for chronic empyema, and that you made a nearly total resection of several ribs under the impression that this was Estlander's usual operation. I called your attention to the fact that Estlander's idea was only to make a partial resection of the ribs. So little is written in American journals about this operation, that I will choose it as my first subject for a short communication to THE MEDICAL PRESS; so much more, as the very first patient I saw in the Copenhagen Commune Hospital had had this operation performed, as the operation is quite frequently performed on the different wards, and as I, with the kind permission of Prof. Studsgaard, surgeon-in-chief of the first surgical ward, can add extracts of the histories of a number of similar cases, lately operated by him in his ward.

The first communication of Prof. Estlander, in Helsingfors, is found in *Nordisk Medicinsk Archiv.*, Vol. xi., 1879, of which I will give a short referat.

The most important question in cases of chronic suppuration in the pleural cavity is, whether adhesions are formed between pleura costalis and pulmonalis or not. The lung cannot collapse if adhesions are present, the suppurating cavity will be small, and recovery takes place without great trouble. If there are no adhesions, then the lung can and does collapse, and as the pleural covering (pleura pulmonalis) becomes enormously thickened by the chronic suppuration, the lung cannot expand again; while, on the other hand, the bony wall of the chest cannot bend inwards to meet the collapsed lung. The result is, that in spite of all treatment, in spite of all kinds of antiseptic injections, the suppuration continues for months and months, till at last œdematous swelling around the malleoli shows that amyloid degeneration has commenced, and that the case is hopeless. It is just in these cases that resection of the ribs is indicated, to make it possible for the wall of the chest to bend inwards and meet the collapsed lung. Estlander demands as a *conditio sine qua non*, that the suppuration shall have lasted for several months, the longer the better, and for two reasons:

(1) The reason why the suppurating cavity becomes smaller is mostly the cicatricial contraction of the thickened pleura costalis. The power and force of this cicatricial contraction may be seen in old cases of empyema, in which we find scoliosis with applanation of the ribs in such a degree that sometimes even it is impossible to introduce an instrument between two ribs. The longer the suppuration has lasted, the thicker is the pleura (two to four millimeters), and therefore the greater the contraction of the new-formed tissue. Antagonistic to this force are the ribs forming the bony wall of the chest, and to overcome their resistance resection becomes necessary. Estlander removed in his first operation almost the whole bony part of one rib, but since then he advises, as much to be preferred, to remove smaller parts of several ribs, more or less according to the size of the suppurating cavity, generally three to six centimeters of from three to six ribs. The result of the operation depends less on the size of the resected pieces than on the

decreased resistance of the bony wall of the chest. The ribs are now able to bend inwards and diminish the suppurating cavity.

(2) The operation can only be safely performed when the pleura costalis has become thickened on account of the chronic suppuration; the whole operation does not then amount to much more than a few wounds in the skin, which heal with ease. To avoid the large muscles, he performs the operation in the axillary region, generally with a simple incision in the direction of the ribs and between two ribs. Through this incision three to six centimeters of the two ribs are removed subperiosteally by aid of a pair of bone scissors, strongly concave in form. A similar incision is made for the next two ribs, and a third if six ribs are to be resected. The operation is very simple and lasts only a few minutes. The drain is left in the lowest angle of the lowest incision; the others are immediately closed with sutures, and heal soon.

In the Commune Hospital in Copenhagen the operation is performed with a single incision, perpendicular to the direction of the ribs; four to six centimeters or more of four to six ribs are removed through this incision. The skin can, with care, be pushed so far aside that transverse incisions do not become necessary. Sometimes the result is not what was expected, even when large pieces have been removed from many ribs, as the pleura costalis has become so thickened that it does not bend inwards. Max Schede has recommended the removal of a large part of the wall of the chest in these cases, in the following manner:

He makes a convex incision along the anterior or the posterior margin of the suppurating cavity, forming a large flap of skin, the basis of which is opposite the other margin of the suppurating cavity. He then removes ten to twelve centimeters of three or four ribs subperiosteally, and thereafter with a pair of scissors all the soft parts, ligating the intercostal arteries as they are cut. The flap is then brought down and fixed over the cavity with many sutures, in the hope that it may unite with the pleura pulmonalis.

[A procedure quite similar to this was resorted to by the Editor in the case referred in the first paragraph of this letter. Recovery rapidly followed.]

He operated on three old cases in this manner; one recovered

quickly; the others were lost track of. In a case operated by Wissinger, and yet under treatment when last heard of, the suppurating cavity had become but one-twelfth of its original size. I will add a short extract of the cases lately operated on in the first surgical ward of the Commune Hospital.

No. 1.—Carl Thomsen, thirty years of age, was operated for empyema in October, 1882, in the Commune Hospital (2d medical ward) and left it cured in two months. He entered the hospital again in April, 1883, for empyema, and 4,000 cub. cent. of yellowish greenish pus were removed by aspiration. A fistula remaining with considerable secretion of pus, subperiostal resection of seventh, eighth, and ninth ribs (two centimeters of each) was performed in June, 1883. The wound not healing, and the pus secretion continuing copious, larger parts of the same ribs were removed in November, 1883. He left the hospital in February, 1884, for treatment in the polyclinic with an open fistula of four inches depth, but with great retraction of left side, slight scoliosis, some dullness over both lungtips, with prolonged expiration, but without râles. He had then a poor appetite, was losing flesh slowly, had some evening-fever and slight night-sweat.

He reentered the hospital (1st surgical ward) in June, 1884. The fistula was then three inches deep with moderate secretion of thick pus; the symptoms of chronic infiltration in both lungtips had increased, urine was normal.

June 28, 1884. Estlander's operation with incision perpendicular to the direction of the ribs. Two to three centimeters were removed from both ends of the previously resected ribs (seventh, eighth and ninth) and then six centimeters from fourth, fifth and sixth. The soft parts of the chest wall were thereafter removed (Max Schede's modification of Estlander's operation) together with the very much thickened (one-half inch) pleura costalis; large drainage tubes were introduced in the lower angle, sutures and antiseptic dressing were applied. The bandage was changed generally every other day on account of the copious secretion. He improved thereafter, increased during the next four months eighteen pounds in weight, and felt pretty well. The cicatricial retraction continued and he left the hospital for polyclinic treatment in March, 1885, in

a much improved condition, but still with symptoms of chronic infiltration in both lungs. He died nine months later of phthisis.

No. 2.—Maren Johnson, twenty-five years of age, teacher, entered the hospital (1st surgical ward) on the 9th of April, 1885. She has for eight years complained now and then of cough, shortening of breath and pain in the left side, but without fever or night-sweat. Dull percussion over whole left side of chest, heart pushed over towards the right side, the ictus cordis being felt near the right nipple. No respiration or pectoral fremitus on the left side. Subperiostal resection was performed of eighth, ninth and tenth ribs (three to four centimeters of each) through a longitudinal incision in the posterior axillary line. The pleural cavity was thereafter incised and 2,000 cubic centimeters of creamy, whitish pus evacuated. Two big drainage-tubes were introduced, the cavity cleansed by irrigation with a three per cent. solution of boric acid and a sublimatized cotton dressing applied.

April 17. Dressing changed for the fourth time; temperature normal, secretion scanty, good appetite; the lung commences to dilate.

May 15. The improvement does not progress and the drainage-tubes do not empty the cavity completely. Therefore, resection of seventh and eleventh ribs (four to five centimeters of each) with removal of the soft parts of the chest-wall (Max Schede's modification). Microscopical examination of the resected pleura costalis reveals copious tubercle formation.

May 27. Odorless, scanty secretion, the cavity granulates well.

June 8. The patient is up, aseptic secretion, good appetite, but the cavity diminishes but slowly.

Sept. 23. The anterior part of the chest-wall too prominent; the lung does not dilate any more; therefore resection of three to four centimeters of the anterior portion of the last resected ribs, and six centimeters of fifth, fourth and third ribs without opening the pleural cavity, new incisions being made through the skin.

Oct. 15. Strong retraction of the cicatrix. Leaves the hospital with a drain for polyclinic treatment.

No. 3.—Victor Ingelmann, thirty-three years of age, entered the Commune Hospital on the 17th of October, 1885. He was treated

in the year 1883 in the almshouse hospital for pleurisy on the right side, with about ten aspirations. In July, 1884, an incision was made and a drainage-tube introduced into the right pleural cavity, about 2,000 cub. cent. of a purulent, odorless fluid being evacuated. He left the hospital in August, 1885, with a drainage-tube, but able to work. Five days previous to his entrance he commenced to complain of shortness of breath, chills, night-sweat, loss of appetite and some cough. By the objective examination a fistula was seen in the sixth intercostal space and anterior axillary line, through this a moderate purulent discharge. Percussion dull upwards; tympanitic downwards; respiration bronchial, downwards, of decreased intensity.

Oct. 28. Estlander's operation, by which six to eight centimeters were removed, of fourth, fifth, sixth and seventh ribs through a linear incision in the axillary line. The much thickened pleura costalis was cut through along the incision to explore the cavity, which was found moderate in size. A large drainage-tube was introduced, the wound closed with sutures and a dressing of sublimatized cotton applied. As the temperature kept about 102 and the secretion of pus continued copious, the wound was reopened on November 11, a part of the thickened pleura removed and two large drainage-tubes introduced. The bandage was changed every other day; the temperature fell towards normal and the appetite improved.

Dec. 7. Some albumen in the urine, the amount of which subsequently increased.

April 6, 1886. The cicatricial retraction considerable; scarcely any discharge, but œdematous swelling of face and feet.

Aug. 25. Wound almost healed and the cicatrix greatly retracted; scoliosis, convex to the right side, with compensating curves above and below; albuminuria undiminished. He has lately greatly improved in strength. He left the hospital in September, but died later of dropsy.

No. 4. Jensine Schon, twenty-nine years of age; married; entered the hospital (medical ward) on the 2d day of March, 1886. She is of healthy parentage. She was delivered of a healthy child on the 10th of January, 1886. During the puerperium she had repeatedly attacks of chills with profuse perspiration and high temperature (104). A parametritis developed itself, but was cured in

the course of some weeks. Since the latter part of January she has complained of cough, shortness of breath, stitch in the left side, continual fever, frequent pulse and loss of flesh. By the objective examination there were found all the signs of a large exudation in the whole left pleural cavity; the temperature was 104; pulse, 120. Thoracentesis was performed between ninth and tenth ribs and 2100 cub. cent. of clear fluid removed, of specific gravity 1,015.

March 15. Again thoracentesis, by which 130 cub. cent. seropurulent fluid was removed, having a fœtid odor.

March 23. Costotomy, by which one inch of ninth rib was resected; thereafter incision of the pleural cavity, through which 1000 cub. cent. fœtid pus was evacuated, mixed with air. The pleural cavity was cleansed by irrigation with a 2% solution of chloride of zinc, a drainage-tube was introduced and an antiseptic dressing applied. The general condition of the patient improved thereafter rapidly, the secretion diminished and continued aseptic; the temperature became normal, and she left the hospital on the 27th of May for a stay in the country, while she continued to visit the hopital every fourth day to have the bandage changed.

She re-entered the hospital (1st surgical ward) on the 3d of August, 1886. She looks pale and poor, but feels still comparatively well. Only a small drainage-tube can be introduced through the fistula. A scoliosis, convex to the right side, has developed itself, the secretion of pus is moderate, without odor. Dull percussion over the whole left side, the respiration can be heard everywhere, but weaker than on the right side.

August 8. Estlander's operation, by aid of an incision five inches long a little in front of the anterior margin of the scapula. A smaller piece was removed from the primarily resected ninth rib, and then four to five centimeters of eighth, seventh, sixth and fifth ribs. As the pleura costalis was much thickened (one-third inch), a part of the remaining soft wall of the chest was removed (Max Schede's modification), the cavity was cleansed with zinc chloride, a tampon of iodoform gauze introduced and a dressing of sublimatized cotton applied.

September 8. The patient is up, fells well; but scanty secretion from the granulation wound; leaves the hospital for polyclinic treatment.

The two next cases are still under treatment in the hospital:

No. 5. Jens Andersen, twenty-eight years of age, entered hospital (3d medical ward) on the 20th of April, 1886, for empyema. He had then been sick a month, complaining of fever, chills, pain in the left side, shortening of breath, cough and night-sweat. He has lost much in flesh. The stethoscopic examination showed a large exudation in the left pleural cavity. The heart was pushed over towards the right side. Temp. 102, pulse 100. By exploratory puncture a thick purulent fluid was removed.

April 24. Costotomy of eighth rib, three centimeters being resected. The pleural cavity was thereafter opened and 1700 cub. cent. of a yellowish greenish, purulent, odorless fluid evacuated. The diaphragm and pericardium could be felt with the finger, the lung not. The cavity was irrigated with a solution of salicylic acid (1 to 500), a thick drainage-tube introduced (7 centimeters long) and an antiseptic dressing applied. The temperature fell to normal on the same evening and continued so. Daily change of bandage for a long time. He left the hospital upon his own wish on the 4th of June, the wound being almost healed, but re-entered again on the 23d of June with a discharging fistula and a temperature of 103. The sound could be introduced five centimeters forward and twelve centimeters inwards. A drainage-tube was again introduced with the result that the temperature fell to normal. Removed to first surgical ward on August 23, he having then again considerable discharge and fever.

September 1. Estlander's operation, by which four to six centimeters were resected of the fourth, fifth, sixth and seventh ribs, and a piece removed of the previously resected eighth rib. The thickened pleura was thereafter cut through and removed in the whole length of the wound (Schede's modification), and the wound in the skin united with sutures. Irrigation with zinc chloride and a solution of boric acid (3%). A tampon of iodoform gauze was introduced, and the wound bandaged with iodoform and cotton.

September 6. Temperature normal, no appetite yet, some night-sweat; wound looks well, scanty pus secretion.

September 14. Steadily improving.

No. 6. Adolphine Olsen, forty years old, married, entered the hospital (3d medical ward) on the 6th of June, 1886, on account of

pleurisy. She has for nine years had an attack of pneumonia every spring, but has been well between times. Six weeks previously to this entrance she was taken sick with chills, fever, severe pain in the right side and some cough with scanty whitish expectoration. She has kept her bed and only been able to lie on the right side on account of the dyspnœa. The stethoscopic examination revealed a large exudation in the right pleural cavity. Explorative puncture showed the exudation to consist of yellowish greenish matter of fœtid odor. Temperature 101, pulse 108.

June 8. Increasing dyspnœa, cyanosis and cool extremities. Costotomy, by which three centimeters of the ninth rib were resected in the axillary line. The pleural cavity was thereafter opened and 2500 cubic centimeters of a thin, purulent, fœtid fluid, mixed with air, evacuated. The lung could not be reached with the exploring finger. The cavity was irrigated with zinc chloride (2%) solution, and thereafter with a solution of salycilic acid (1 to 500), a drainage-tube introduced and the wound bandaged with sublimatized cotton.

June 10. Temperature normal, secretion scanty, odorless; she feels well.

June 24. She is up, feeling well.

July 13. The wound looks well. Temperature normal. The sound can be introduced six inches inwards and forwards. Removed to 1st surgical ward.

July 21. Estlander's operation in posterior axillary line. Six to eight centimeters were resected from fourth, fifth, sixth, seventh and eighth ribs, and about four centimeters from the previously resected ninth rib. The fistulous opening and a small piece of the adjacent pleura were excised, the skin and pleura united with sutures, the cavity cleansed with zinc chloride solution (2%) and a tampon of iodoform gauze introduced. Bandaged with iodoform and cotton.

July 25. Bandage changed, considerable pus secretion without odor; wound looks well, normal temperature, respiration and pulse. Appetite improving.

September 1. She is up, feeling well.

September 28. Steadily improving.

Copenhagen, October 4, 1886.

NOTES ON A CASE OF GLAUCOMA—TREATED WITHOUT OPERATION.

BY GEO. E. BLACKHAM, M. D.
Dunkirk, N. Y.

Among all the diseases of the eye, none is more insidious and dangerous to vision than the chronic form of glaucoma. The symptoms are not such as to call the attention of the patient or practitioner specially to the eye till the disease is somewhat advanced, and usually it is by this time too late to save the vision. The symptoms are chiefly severe headache, usually neuralgic in character, coming on chiefly between midnight and daybreak, often accompanied with nausea and vomiting, and recurring with irregular but increasing frequency and violence. Sometimes the eye shows signs of inflammation, but often it does not, and the dilation of the pupil and increased tension of the globe are overlooked, and attention directed solely to the supraorbital pain, which is usually believed to be neuralgic in character, and is treated accordingly, but usually without much benefit, though the intermissions which are characteristic of this form of glaucoma are often credited to some form of treatment. If belladonna or any of its congeners enter into the treatment, either locally or per orem, the results are likely to be most deplorable, changing the slow, insidious chronic form of glaucoma to the acute, violent form in which vision may be permanently extinguished in a few hours. In the inflammatory form, that is, the form in which intense injection, and even chemosis of the ocular and palpebral conjunctiva are added to the glaucomatous conditions proper, attention is more likely to be called to the eye; but, within my own knowledge, such cases have more than once been diagnosed by reputable general practitioners as iritis, and treated as such, with, of course, most deplorable results, as the treatment by mydriatics, which is the sheet anchor in iritis, is certain to aggravate all the pathological conditions in glaucoma.

The pathognomonic signs of glaucoma are: increased tension of the eye-ball, dilatation of the pupil and diminished power of accommodation. In addition to these, the ophthalmoscope reveals cupping of the optic disc, and sometimes pulsation of the retinal

vessels, with more or less loss of transparency of the ocular media, especially the cornea, which may progress far enough to entirely obscure the ophthalmoscopic view of the *fundus oculi.*

The treatment of glaucoma is not specially statisfactory, though the operation of iridectomy (introduced by Von Graefe), often gives brilliant results, especially in the acute form in which all the symptoms set in suddenly and with violence, and there is agonizing pain in the head, violent vomiting, and vision is almost totally extinguished in a few hours. In these cases a skillfully performed iridectomy often, though not always, acts like magic, but it must not be too long delayed; and in the apparently milder form of glaucoma simplex, its good results are not so apparent nor permanent.

In these cases paracentesis of the anterior chamber, sclerotomy, (as proposed by De Wecker), and the use of myotics, especially eserine and pilocarpin, locally, are our most efficient though by no means infallible therapeutic resources.

In view of all these circumstances, I have deemed the following case of sufficient interest to report:

January 9, 1885. Mrs. B., æt. 35, married at 15; one child; general health usually excellent; has had small-pox; comes on account of right eye in which sight has been failing for a couple of months. *Has had no pain in eye till within a few days.* Has had a great deal in right side of head. Diagnosed as supraorbital neuralgia, and treated without success till caffein was prescribed, which gave some relief to headache and nausea, etc. Feels now as if foreign body were in corner of eyelid. There is a queer blurr before her and when she tries to sew something seems to come between her and her needle; pain worst between midnight and morning. Eye has never watered nor looked red, nor has she ever noticed any colored halo around lamp flame.

Examination.—Left eye, normal; right eye, no conjunctival or ciliary injection, sclerotic looks a little too white with a few very prominent vessels. Cornea clear (somewhat insensitive to touch of a little roll of paper), iris blue, not dull, anterior chamber deep, pupil considerably dilated and rather oval. Tension slightly increased.

Opthalmoscopic Examination.—Glaucomatous excavation of disc

about 2 D.=0.6 mm. deep. Some congestion of retinal vessels. Vision O. D. $\frac{20}{30}$ poorly, lines at 90° best. Reads only Jaeger No. 15 at thirteen inches; with +0.50c 90°, $\frac{20}{30}$ better; with +2 D. +0.50c 90°; J. No. 1 at twelve inches. Vision O. S., $\frac{20}{20}$, lines alike.

The + tension of eye-ball, dilated pupil, insensitive cornea, loss of accommodation and above all the excavation or cupping of the optic disk in right eye, while the left was perfectly normal, made clear the diagnosis—Glaucoma—and accounted for the persistent unilateral headaches that had been erroneously diagnosed and treated as neuralgia.

I gave an unencouraging prognosis; stated that iridectomy would probably be necessary to save the eye; and saw no more of my patient till January 27, when she returned with all symptoms increased and prepared to submit to any treatment.

I ordered for reading and sewing a pair of eye-glasses with O. D. +2.50 spherical, O. S. +0.25 spherical, using for left eye the weakest glass made, simply that both eyes might look through glass.

I dropped a 1% solution of muriate of pilocarpin into the right eye, and gave her a $\frac{1}{2}$% solution of same to be used at night, and a weak preparation of gelsemium for internal use, and capsule of quinine, nux vomica, rheum and pepsin to be taken after meals.

I saw her daily for a time, dropping in the 1% solution of pilocarpin; she using the $\frac{1}{2}$% solution herself at night and continuing the internal treatment.

January 31. All symptoms improved; tension diminished to nearly normal; accommodation increased to nearly normal: pupil not so much dilated and cornea more sensitive to touch; ophthalmoscopic appearances not changed.

February 2. Changed her glasses, giving O. D. + 2., O. S. + 1. for near work, and discontinued her daily visits to my office, leaving her to continue use of $\frac{1}{2}$% solution pilocarpin in right eye daily, and the capsules as before; discontinued the gelsemium.

April 16. Reports very general improvement; no pain in head or eye since February 2; has been using pilocarpin daily up to April 13; vision, O. D. $\frac{20}{30}$, J. No. 1 at 11 inches, O. S. $\frac{20}{20}$, J. No. 1 at 11 inches; can read and sew without glasses.

I saw her occasionally till into the summer, she continued to use the pilocarpin occasionally, just enough to keep right pupil normal, and she had little trouble.

November 7, 1885, she came back again saying left eye not as good for close work now as right. On examination, v. O. D., $\frac{20}{15}$, J. No. 1 at 14 in.; O. S., $\frac{20}{15}$, J. No. 1 at 14 in. Graefe test shows slight *crossed* diplopia at 10 ft. Changed her glasses again (she has not used any lately), giving her +1 D. sph. for each eye.

November 17, 1885. O. S. tension slightly +; pupil somewhat dilated and sluggish, cornea not so clear or so sensitive as it should be; has had some pain in right side of head and trouble in reading or sewing. Ophthalmoscope shows disc of left eye now slightly excavated (about 0.3 mm.); vessels congested and tortuous; cornea duller than normal. Ordered renewal of capsules, and daily use of $\frac{1}{2}\%$ sol. pilocarpin mur. in *each* eye at bed-time. Also at this visit used prisms to exercise the recti muscles, and applied mild Faradaic current of high tension P. P. to temples, which gave marked relief.

January 28, 1886. Comes again to report. Has used up the capsules, and has used the $\frac{1}{2}\%$ pilocarpin sol. daily in each eye. Better in every way; good appetite; bowels regular; no headache; vision good; does not need glasses to read or sew; v. $\frac{20}{15}$ in each eye; ophthalmoscope shows excavation of discs unchanged; fundus of each eye otherwise normal.

Since then she has reported occasionally for examination, and I have renewed prescriptions for capsules and for pilocarpin solution once or twice, to be used p. r. n.

July 8, I saw her. V. in each eye, $\frac{20}{15}$, and J. No. 1 at 11 to 14 inches; pupils about normal; T. slightly +; has not used pilocarpin much of late, but has had no severe pain, nor, indeed, serious discomfort. Dismissed her with instructions to use the pilocarpin occasionally, and to report at first sign of serious trouble.

I report this case because it seems to me of interest: (1) In that it was mistaken for neuralgia, etc., and the ocular trouble entirely overlooked by several general practitioners of experience and reputation. (2) Because the glaucoma yielded to treatment without operation. (3) Because the left eye passed through the

same course as the right after the recovery of the latter. (4) Because the final result was vision better than the average, *i. e.*, $\frac{20}{15}$ or $1\frac{1}{3}$. (5) Because it illustrates so clearly the necessity of a correct diagnosis.

THE NOBILITY OF PHARMACY AS A PROFESSION:

Being a Portion of the Introductory Address at the Opening of the Pharmaceutical Department, University of Buffalo, September 20, 1886.

BY CLAY W. HOLMES.
Elmira, New York.

The presence of so large an assemblage of intelligent people as representatives of the citizenship of Buffalo, pronounces a keen interest in Pharmacy, and bespeaks volumes in behalf of the institution just born. I am called upon to address you on the subject thus brought to your notice. I feel it a great honor to have been selected to follow the eminent gentlemen who have preceded me, in an exposition of the nobility of Pharmacy.

We can trace three professions from remote antiquity: Law, Theology and Medicine. While I bow reverently to Theology, and admit the charms of Law, I believe that Medicine justly claims preeminence. Medicine is a duplex profession: treating, first, of disease; second, of remedies. The latter department is known as Pharmacy. Do you realize how much is concealed in that one word? It is at once a profession, a science, and an art. Pharmacy is enveloped under a great cloak which covers chemistry, mineralogy, materia medica, botany, microscopy, and medicine.

Is this assertion too broad? Let us look for a moment and see: Chemistry *may* be regarded as a distinct science; still it is so interwoven with Pharmacy as to partake of its very existence. You may have Chemistry without Pharmacy, but Pharmacy cannot exist without Chemistry. Chemistry owes its birth and growth to Pharmacy. The most noted chemists of the age have been poor struggling apothecaries who, in the practice of their drudgery, have given birth to the great discoveries which have made Chemistry what it is. Can any one tell who discovered glycerine? You all, doubtless,

know what it is, and have, perhaps, used it for years. Scheele whose name has been famous for more than a hundred years, discovered it in 1779, while making lead plaster. For seventy-five years it was made by the process he accidentally discovered, before a simpler process was discovered. This illustrious pharmacist also discovered Tartaric Acid, Prussic Acid, Chlorine, and many other familiar chemicals. The honor of the discovery of Oxygen, the key-note of Chemistry, is shared equally between him and Priestly. Every time you handle a match, you perpetuate the memory of the poor apothecary who discovered Phosphorus. I might name a host of familiar chemicals discovered by the aid of Pharmacy, but I forbear. Let the names of such men as Bergmann, Liebig, Cavendish, Priestly, Scheele and Lavoisier, the father of modern Chemistry, which are rendered imperishable in the annals of science, complete my argument.

The connection of Mineralogy, Botany and Materia Medica with Pharmacy is so self-evident, that the theory proves itself. We cannot fathom the mystery which surrounds Bismuth or Arsenic, without investigating their mineral history; we fail to comprehend the value of Opium or Cinchona except by studying their botanical characteristics. To Materia Medica we owe a knowledge of the proper time to collect herbs, and the ways in which to treat and cure them. Microscopy, the latest step in the advancement of pharmaceutical science, gives us the ability to detect fraud and adulteration.

The relation of Medicine to Pharmacy is so intricate as to require more than passing notice.

Medicine, as stated before, is a duplex profession. Following our analysis still further, its first component, Disease, is capable of subdivision: First, Diagnosis; second, Therapeutics. Let us eliminate Diagnosis, the only factor which is entirely distinct from Pharmacy, and speak of Medicine as Therapeutics. This is the science which applies Medicine to the treatment of disease. Without Pharmacy, Therapeutics is as helpless as an infant. What value would you place upon a knowledge of the treatment necessary to cure disease in the absence of a proper understanding of the methods by which the medicine should be prepared?

Again, without Therapeutics, Pharmacy would be an elephant upon our hands. What wouid avail the most carefully-prepared medicines, without a proper knowledge of their administration? Therapeutic progress is regulated by the thermometer of pharmaceutical advancement. Another link might be furnished: Pharmacy and Therapeutics both depend upon Materia Medica; and so the web grows. Pharmacy cannot be a science without Therapeutics. Their relations are fitly compared to the union existing between husband and wife — one in heart, one in object, yet each with separate organisms; each giving honor to the other, yet each depending on the aid of the other for success.

Having shown the importance of Pharmacy as a profession, we observe that it is likewise entitled to consideration as a science and an art.

Observation is the basis of every science. It is a guide to synthesis as well as analysis. Art in Pharmacy consists in the preparation of drugs, the recognition of quality and adulteration, the making of chemical and pharmaceutical preparations, and the correct compounding of prescriptions. We get our first records of Pharmacy from the Bible. Every country on the face of the globe is tributary to her requirements.

With these facts before us, can any one fail to recognize the nobility which surrounds Pharmacy, or look askance at the dignity with which we clothe it?

Descending from the heights of her fame we would not ignore the relation she bears to commercial life. In this Pharmacy has a two-fold aspect: First, in her relation to pharmacists; second, to druggists. Look at the pharmacist, armed with all the implements and skill necessary to conduct his business intelligently and successfully, and then see the druggist, who, without education or ability, lays claim to the pharmacist's mantle, but only barters in drugs and drinks. A picture of the latter is so graphically sketched by a Boston orator that I quote: "What an incongruous mixture the modern "Pharmacy" is, and judge how well your wants are supplied by it. It has the corner store of the last built marble block, and fronts upon the square. Its front and side are continuous walls of plate glass, the signs of etched glass. There is an inlaid mortar in the

sidewalk, and an enormous one hangs over it. It illuminates the whole square at night with its many colored lights. As you enter a hissing sound like that of an overcharged boiler comes from a magnificent monumental cathedral of variagated marble standing before you, almost hiding the view of the room. A female figure beneath a bell is being mercilessly washed, while tumblers are waltzing in a basin near by. Passing this the room stretches magnificently into the distance, the marble counters on either side, the crystal chandeliers above can almost be seen reflected in the polished marble floor. An inlaid walnut case covers the partition side, and is filled from end to end with gilded bottles standing like soldiers at dress parade. A little screen at the further end is marked "dispensing counter," a door near by, labeled in large letters "laboratory," opens into a closet. In one window temperance bitters and bilious cordials form a sort of pyramid. In another an officinal display is made with jars of ginger, cardamom, and rhubarb; and innocently mingled with them a few bottles of well-known liquors suggest that these are medicines as well as any, for the urbane proprietor has paid all the licenses without grumbling. Another window is devoted to soaps and perfumery, and holds a glass sign, "orders for cleaning kid gloves received here." The window counter contains cigars, with various smokers conveniences; another an assortment of toilet artlcles, including pocket flasks. There is an anxious father waiting here with a recipe for his dear ones at home, while some sociable ladies finish their soda, and a fastidious young man's taste in cigars is satisfied, before his pressing needs can be attended to," etc.

Was this a junk-shop or a pharmacy?

* * * * * *

As might be expected the glittering charms concealed within the alchemist's alembric have led many greedy mortals to assume our garb in the hope of gain. Within the last fifteen years nearly all of the states and territories have secured legislative enactments, and, to-day, we are protected by a safeguard, the value of which can only be appreciated when a mistake has been made and life has been sacrificed on the altar of ignorance or carelessness. Does it not then seem reasonable that this city, with its quarter of a million in-

habitants, is in need of the means of education for her young men in the glorious art of Pharmacy. Your self-protection demands it. What is true of the city of Buffalo is equally applicable to the adjacent territory. We are surrounded by Syracuse, Rochester, Elmira, Binghamton, and many other large places to which this is the nearest center. There has been no college of Pharmacy in this section, and those who desired to drink of the waters of science have had to go far away to quench their thirst. To-night you have welcomed the birth of an institution where young men can receive such an education as will enable them to enter the arena with the stamp of proficiency on their brows and a warrant for the confidence which you should not be slow to accord them. There is reason for congratulation on your part that you are the favored in having your lives and your health vouchsafed to you and your posterity. The faithful ones, who have for years dispensed to you your drugs, must soon pass away, and their places be filled by others. You have here the guarantee that their successors will be qualified for the task. The college sees much to encourage its founders in the prediction of a successful and prosperous carreer. The territory is large which should be tributary to her, and her invitation stretches across the border. God speed the Buffalo College of Pharmacy.

PRESERVATION OF DEAD BODIES.—Edward I., who died in 1307, was found not decayed 463 years subsequently. The flesh on the face was a little wasted, but not putrid. The body of Canute, who died in 1017, was found fresh in 1766. That of William the Conqueror and his wife were perfect in 1522. In 1569 three Roman soldiers, in the dress of their country, fully equipped with arms, were dug out of a peat-moss near Aberdeen. They were quite fresh and plump after a lapse of about fifteen hundred years. In 1717 the bodies of Lady Kilsyth and her infant were emboweled and embalmed. In 1796 they were found as perfect as in the hour they were entombed. Every feature and limb was full. The infant's features were as composed as if he had only been asleep for eighty years. His color was as fresh and his flesh as plump and full as in the perfect glow of health. The smile of infancy and innocency was on his lips. At a little distance it was difficult to distinguish whether Lady Kilsyth was alive or dead.—*Gaillard's Monthly.*

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BUFFALO, N. Y., NOVEMBER, 1886.

CONCERNING THE ETIOLOGY OF OSTEOMYELITIS.

Pathologists are now pretty well agreed that osteomyelitis is virtually a phlegmon of osseous tissue, which differs in its characteristics from other phlegmons only on account of its location. It is further an established fact that all suppuration is of bacterial origin, and that without the presence of certain pyogenic bacteria we have no pus. With these two statements as premises we are forced to the conclusion that osteomyelitis is, in effect, a disease caused by pyogenic germs;—a conclusion, moreover, confirmed by independent researches carried on from various directions. Whether one cultivates the microbes from pus of a fresh case, or injects pure cultures of the organism in question, and then inflicts some traumatism upon a bone; or whether one makes careful microscopic examinations of the pus, the result is ever the same.

True, for a time it was held that there was a specific germ for the acute infectious form of osteomyelitis, but it has since been found that the organism in question is one form of the *staphylococcus pyogenes* (the *aureus* usually), which is so common in the pus of ordinary abscess, and that it is the accident of trauma, combined with the accident of location and what we may call the *vulnerability* of the tissues, which determine whether we shall have an abscess of soft parts or of bone tissue, and whether this process shall be one of fulminating rapidity or a slow one.

We call attention to these points as introductory to mention of a paper read by M. Lannelongue—who has done so much to widen our notions of pathology of bone—at a meeting of the Société de Chirurgie de Paris, held June 9th, which we desire to briefly summarize.

Before recognition of these germs it was known that osteomyelitis seemed to be caused by most widely diverse causes; *e. g.* cold, injury, acute wasting disease, etc. The peculiar physiological activity of long bones in adolescents, especially toward their extremities, undoubtedly plays an important predisposing part, nevertheless it is usually a contributing and not an exciting cause. Klebs and Recklinghausen both observed cocci in pus from these cases. Pasteur identified them and gave them a name; and since him Becker, Rosenbach, Krause and Rodet have made many cultivations with them, and many inoculation experiments. The organism which they have thus worked with well deserves the epithet, *aureus*, since it grows with a golden yellow color upon the surface of culture media.

The osseous lesions resulting from the injections of pus containing this form are not necessarily ever the same; rarefying ostitis, bone abscess, necrosis, etc., may be thus produced, and usually in the neighborhood of the epiphyses.

One may, therefore, say that osteomyelitis is an infectious disease, like tuberculosis or erysipelas, developed under the evil influence of a known microorganism in some way introduced into the economy; and that of the conditions making such introduction easy, and such lodgment effective, the natural physiological activity of the ends of long bones is the most favorable. Now, *how* are they introduced? *A priori* it is not impossible that they may gain entrance through either the alimentary canal or the respiratory organs; yet nothing in the clinical history of these cases makes this seem more than an exceptional occurrence. Everything points to some solution of cutaneous continuity as their chosen site of entrance. Certainly, in the case of destructive felons a slight injury of the skin can be found in almost every case. And in more extensive cases, where long bones are involved, a careful questioning and minute examination will usually reveal some precedent lesion of the skin

or mucous membrane some two or three weeks before. Of fourteen such cases investigated by Ayala, in six there had been excoriations; in four, furuncle or abscess; in two, chilblains; in one, a wound, and in another an aphthous condition of the mouth. Beside these cases Lannelongue detailed several of his own; among them two in children who presented ecthymatous patches, and others where osteomyelitis of the jaw had developed among children suffering from disease of the gums during dentition. It seems likely, then, that when properly sought for the port of entry of the pathogenic bacteria may be found in all or nearly all of these cases.

These views of Lannelongue are those which the writer of this editorial independently arrived at some time ago,—in fact, soon after he was led by the evidence to accept the bacterial origin of osteomyelitis; and they seem to him to involve pathological points of extreme importance to which reference will be made in the future. Further, it in no wise detracts from the interest which pathologists feel in the *staphylococcus pyogenes aureus* that, according to the latest researches, it is also the organism which produces the mischief in cases of acute ulcerative endocarditis. It thus appears to be a microbe bent on disaster, and with evil intent, lodge where it may.

PHOTOGRAPHING THE HEART IN ACTION.

Some extremely ingenious mechanism for this purpose has been recently contrived by Prof. W. G. Thompson, of New York, whose paper on the method of studying the heart, in the March number of THE MEDICAL PRESS, will be pleasantly recalled by all. A tubular camera mounted movably on a stand; a frog plate or device for holding some other animal; facilities for a supply of physiological salt solution,—all these are especially adapted for the purpose. Inside the camera is a rotating perforated disc and a rotating dry plate. By turning an outside handle five distinct photographs can be taken in half a second. The instrument is the most perfect of the kind ever devised, and stamps Dr. Thompson as the leading investigator of the world in this important field of research.

* * *

WE have been obliged to decline two or three proffered communications relative to a certain placard which has of late been

prominently and offensively posted on telegraph poles, ash-barrels, sheds and fences, to the effect that a certain branch hospital was open to those who drove against the poles, fell into or over the barrels, or committed nuisances against the sheds and fences. We declined them because it is not the purpose of this journal to open any controversy in its pages which does not tend to the better interests of science. Nevertheless, such flagrant violation of professional decency deserves perhaps a passing comment which only these communications have provoked.

If a hospital chooses to announce to the public that it is running an ambulance, we see no objection to its making public the fact. But it does seem anything but highly professional to take such an opportunity to proclaim the names of its staff,—a staff, by the way, larger than the number of beds at disposal—with prominent mention of the specialists who serve the institution, and a list, even, of the house staff. Such a document is, we believe, unique, and consequently a curiosity in the history of American medicine. Were it not that these gentlemen have already received so wide-spread mention we should feel like reproducing it.

Or, as one of the aforesaid gentlemen once put it in his peculiar way: "Our city in its commercial as well as in its professional interests has been wisely conservative, and as a consequence *we are sensitive to innovations upon old established customs*," etc. And again: "It is not always prudent to violate the ethical sensibilities of the profession with a view to gain time or to hasten the ordinary course of human events." *Verbum sap.*

* * *

No small interest was recently aroused among the dentists of this city on the occasion of a flying visit by Dr. Younger, of San Francisco, who demonstrated at Dr. Barrett's office his method of re-implantation of teeth. Under this term is included the selection of a tooth of desired form, which should not be more than a year old, and whose pericementum should be still intact, the dissection through the gum, the drilling out of a suitable socket in the bone, and the insertion of the tooth into the cavity thus made. This operation was performed upon one of the students from the medical college, and in the presence of a number of professional gentlemen.

Dr. Younger has had most remarkable success in the West, with this procedure, and is now making a tour of the East, for the purpose of demonstrating his method, which, as will be readily understood, is one of the greatest importance to all who concern themselves with diseases of the mouth.

Correspondence.

LETTER FROM BERLIN.

BERLIN, Sept. 27, 1886.

My Dear Doctor: As the Association of German Naturalists and Physicians, which has just concluded its annual convention, is principally composed of medical men, a short report of some of the section-work may possibly be of interest to the readers of THE MEDICAL PRESS. The essentially medical character of the association is best demonstrated by the large number of sections which are devoted to the different branches of medicine, eighteen out of thirty. Profs. Virchow and Hoffman presided at the general meetings, which were attended by 2214 members, 1914 associates and 1475 ladies (these latter form a class by themselves and are not eligible to membership). The sections elect a new chairman every time they meet, but unlike the American Association, where everything is public, only those who possess the necessary certificate are admitted here to any of the meetings.

The section on Physiology devoted most of its time to a red-hot and at times quite personal discussion about the functions of the cerebrum. One side, led by Profs. Hitzig (Halle) and Munk (Berlin), claims that a long series of experiments on dogs, rabbits, monkeys, etc., demonstrates the existence of certain centers in certain definite localities of the cortical substance of the cerebrum; while the other side, led by Prof. Goltz (Strasburg), denies their existence. Profs. Meynert and Exner (Vienna), on the other hand, seemed inclined to stand between the two factions by admitting the existence of the centers, but not in such circumscribed and localized position as claimed. The sum total of the long and certainly interesting discussion was characterized very forcibly by Prof.

Heidenhain (Breslau), who said that "our ideas about the functions of the cerebrum were now about as clear as—shoeblacking." A good many more experiments will be needed before this delicate question can be decided, but altogether the localization advocates are a good way ahead.

Emmerich, of Munich, reported a series of experiments on guinea pigs which deserve a wide publication. He observed, incidentally, that when such animals had been infected with pure cultures of erysipelas, other pathogenic forms of bacteria did not affect them. Examination of these animals after death demonstrated the existence of erysipelas only. A series of experiments were made with "milzbrand." A certain number of rabbits were inoculated with erysipelas first and later with milzbrand; and another series took milzbrand first and later hypodermic or intravenous injections of erysipelas. The results were very interesting. Out of nine rabbits of the first series, only two died (of erysipelas); while of an equal number inoculated with milzbrand only, *all* died. The second series, attempting to cure milzbrand by hypodermic injections of erysipelas cultures, proved a failure, while intravenous injections cured four out of ten. The author claims that the destruction of the milzbrand bacillus in the tissues of the body is not due to the erysipelas coccus directly, but to an intense inflammation of the cells of the body caused by the invasion of the latter.

This certainly opens a wide field to experimenters, and if infectious diseases can be cured in this manner, fame will crown the successful discoverer.

Lichtenberg, of Budapest, has examined 250 railroad officials in Hungary, and found in 36.8 per cent. diseases of the ear. Hence he coucludes that at least some of the railroad accidents on record may be due to a defective hearing on the part of the railroad officials, instead of negligence as often claimed.

Plagge, of Berlin, spoke of water filtration, and based the quality of the filter upon its capacity to purify water from germs. All his researches with the usual form of filters made of spongy iron, charcoal, gravel, broken stone and paper, demonstrated not only their inefficiency in separating the germs, but very often proved veritable breeding places of bacteria, so that at times the filtrate contained

from 100 to 1000 times as many germs as the water to be filtered. Experiments made with pure cultures of typhus and cholera germs proved that all these filters permitted their passage without any obstruction. Clay and asbetos filters gave better results in the beginning, but lost their good quality after a while. The most recent invention in filters has a combination of asbestos in clay cells of peculiar diversity and construction, but it has not yet been examined, and the original assertion of the author holds good, that we possess *no* filter which can give us a drinking water free of germs, and the Imperial Board of Health in Berlin coroborates the statement.

Lenhartz, of Leipzig, has collected long columns of figures to prove that an antagonism between morphine and atropine does not exist. He records 132 cases of morphine poisoning; 59 of these were treated with atropine, and resulted in 28% death; the other 73 cases on record, none of which were so treated, gave a mortality of 15% only. His conclusions were, however, not accepted, and he was told very strongly that the quantity of morphine as well as atropine, the strength of the patient, time since the poison was taken, etc., etc., were factors not included in a single series of figures and that such statistics as those offered would not be accepted as conclusive.

A discussion on cramming in schools and school hygiene, brought out the interesting fact that the city of Hamburg has abolished the afternoon sessions in the schools entirely and with apparently good success in every way.

There are quite a number of interesting items left, which I shall send with my next letter in about a week.

Cordially yours, JULIUS POHLMAN.

LETTER FROM PERSIA.

OROOMIAH, August 15th, 1886.

EDITOR MEDICAL PRESS:

Last week I went a day's journey in a buggy (35 miles), to meet some friends who were coming to visit us. Soon after reaching them all the sick from the village came to me and by the next day my arrival was known in the adjoining village from which many more

came. A few cases which were seen may interest your readers. One old man had been recently operated on for cataract. An itinerant optician had couched it for him. This is the only operation performed here for cataract. The result was fair, as it is in perhaps 40% of the cases. Several cases of granular conjunctivitis and corneal opacities came. Some had received treatment at the hands of a native doctor. These specialists are usually women and use heroic treatment.

For granular lids the most common treatment is to rub the everted lids with loaf sugar, then with garlic and a smarting weed. For corneal opacities brick-dust finely powdered, or clay, alum, yellow oxide of mercury, sulphate of copper and caustic. Herbs are dusted into the eye and kept there for twenty-four hours by sealing the lids with wax and bandages. I must confess that some eyes outlive this treatment and are the better for it.

Cases of distichiasis, trichiasis and entropium were also seen. Evulsion for the former troubles is condemned even by the laity, on account of the belief that it only increases the number of cilia. They prefer the removal of the redundant skin of the lids, or else they keep the cilia out of the eye by fastening them on to the eyelid with chewing gum. Entropium is left untouched.

A woman with partial paralysis of the lower extremities had a year ago suffered from lumbar rheumatism. Other things failing she had had a heavy man walk up and down her back. Soon after this she lost all power over her legs. On examination I found what had been either a fracture or dislocation of the lumbar vertebræ. This is no reason, however, for the discontinuance of this common treatment. To cure the paralysis, among other things, a grave had been dug for her and lined with liquorice plant,—the stalk and leaf—into which she was laid in a nude state. Although she sweat there for an hour entirely covered by this plant her paresis did not leave her.

A case of tonsilitis gives the native treatment. As soon as the tonsils are well swollen, the female tonsil doctor, of which every hamlet has one or more, roughly introduces two figures into the throat and with the other hand outside, actually crushes them. This treatment, I am convinced, predisposes these abused glands not only

to inflammation, but to a very high degree of inflammation. Nearly every one here has had his tonsils repeatedly crushed. It often results in indolent ulcers of the parts.

Two more cases may suffice to give you an idea of what one daily meets with here. One had a "dislocation of the navel" and the other had a "mouthful lodged in his throat"—both are common occurences here. The symptoms of the former trouble are anorexia, dragging about the umbilical region, pain in the bowels with diarrhœa or constipation, general debility and pulsation of the abdominal aorta elsewhere than directly under the umbilicus. The treatment is reduction by softening this region with poultices and then pushing it with the bare heel while the patient lies on a hard floor, at the same time giving the heel a rotary motion as if removing the navel to its place.

All Persians take immense mouthfuls—eating rapidly—so it is not strange if their food does sometimes lodge in the œsophagus, but when a case comes to you of a year's standing, you feel a little puzzled and might do as I did; send him to the specialist, who will fill his own mouth with water, then fitting it to the mouth of his patient, forcibly inject its contents against the obstruction. One or more attempts will suffice.

Truly Yours, J. P. COCHRAN.

Translations.

DIABETIC ACTONEÆMIA.

BY J. CORNILLON AND J. MALLAT.

[Translated from *Le Progrès Médicalé*, April 10, 1886, by Irving M. Snow, M. D.]

In December, 1883, two articles were published in *Le Progrès Médicale*, in which we set forth the semeiological value of diabetic coma, and drew the following conclusions:

1. In the immense majority of cases of diabetic coma, acetonæmia cannot be regarded as the direct and absolute cause of the cerebral symptoms.

2. The reddish brown coloration, produced by the perchloride of iron test, and the clear rose tint by the sulphuric acid test, is ob-

served not only in the urine of individuals perishing of diabetic coma, but also among emaciated and enfeebled subjects who have been diabetic for a long period of time.

3. These reactions are pathognomonic of the presence of acetone; they are not in direct proportion to the qualities of sugar found in the urine.

4. The ferric and sulphuric reactions are not generally observed in fat diabetics, even if their disease be of long standing.

We explained in the *Repertoire de Pharmacie*, in 1884, that what was usually understood by acetonuria and the cases of diabetic coma in emaciated and enfeebled diabetics could not be ascribed to the presence of acetone, but that the cerebral accidents in some cases, and the disorders of nutrition in others, were due to the existence in the economy of an alkaline sulpho-cyanide. The various proofs of this explanation and means of determining the proportion of this substance, in the form of sulpho-cyanide of potassium, were included in the same article.

Are there several varieties of diabetic acetonæmia? In our opinion, while there is but a single form of acetonæmia in diabetes, this morbid process may terminate in several ways, either rapidly or slowly.

The diabetic, with acetonæmia, is incapable of all intellectual and physical effort. The memory is at fault, the ideas are a little confused, yet the will preserves its habitual vigor. Social sympathies and affections are lessened.

Physical debility is far more marked than mental decay. The patient is hardly able to arise and dress himself. During the day he does not wish to go out; his meal being finished he stretches himself upon his bed, all the afternoon languid and somnolent; after dinner he goes to bed, but his rest is destroyed by dreams as realistic as the hallucinations of a drunkard.

His breathing is anxious and embarrassed. The only functions which preserve their normal vigor are those of the digestive tract.

In diabetic acetonæmia four principal symptoms are to be noted:

1. Rapid and extensive emaciation.
2. Extreme debility.
3. Urinary troubles.
4. Peculiar odor.

I. In a few weeks the loss of flesh is very rapid. It is not uncommon for patients in two months to lose fifteen to eighteen kilogrammes.

Contrary to what occurs in fat diabetics, and even among some who are spare, this emaciation persists even if it does not increase. The skin, robbed of its adipose padding, is wrinkled, dry, and covered with epidermic scales, which are detached by the slightest friction. The cheek bones project, the eyes are sunken in the orbits, glassy and expressionless; the lips are thin and white; the face is deeply scored with wrinkles; the skin is dull and rough.

II. Debility.—The entire body is enfeebled. The wasted muscles of the lower extremities support the frame with difficulty. The patellar reflex is almost lost. Diminished from the first, it almost disappears in the last stages of the disease. All sexual life is gone.

III. Urinary troubles.—All forms of diabetes are ordinarily accompanied by polyuria; nevertheless, no absolute rule has been formulated in regard to this symptom. In typical diabetes the average excretion of urine is three to four litres in twenty-four hours, exceeding the normal amount by one and one-half to two litres. In diabetic acetonæmia, eight, ten, twelve or even fourteen litres of urine may be passed in twenty-four hours.

The physical and chemical characteristics of the urine merit especial attention. The urine is pale and resembles clear water. Its chemical characteristics are much more pronounced. In glycosuria of gouty subjects the elimination of sugar may not exceed ten to fifteen grammes in twenty-four hours. In the fat diabetic the amount varies from twenty to fifty grammes daily, and in the thin diabetic the quantity of glucose passed in the urine reaches 80 to 100 grammes daily. In diabetic acetonæmia the daily elimination of sugar is rarely less than one hundred grammes, and often 200, 300, 400 and even 500 grammes of glucose may be recovered from the urine passed in twenty-four hours. If the sulpho-cyanide is not always present in direct proportion to the quantity of sugar found in the urine, nevertheless, the largest amounts are usually met with in urine densely loaded with sugar. When the disease halts for a time and the percentage of urinary sugar is diminished, the amount of sulpho-cyanide of potassum is also lessened in appreciable proportion.

The relation between the glucose and the sulpho-cyanide is not constant, but an increase or a diminution in the elimination of sugar is accompanied by a rise or fall of the amount of sulpho-cyanide in the urine.

It may happen as a result of treatment or from other causes that the glycosuria is much diminished. The sulpho-cyanide does not entirely disappear; it is always to be found in traces, not toxic it is true, and persists during the quiescence of the disease. In this way the cyanide follows in close relation the variations of the urinary sugar.

In the diatebic acetonæmia, albumen is absent from the urine; if it be exceptionally discovered, it is found in traces or in quantities so minute that it may be ignored. Urea is generally very markedly increased. Nevertheless, no relation can be established between the amounts of urea and the sulpho-cyanide of potassium existing in the urine of acetonæmia.

IV. Peculiar odor.—Another symptom, which rarely accompanies the presence of the sulpho-cyanide of potassium in the urine, is the odor of chloroform, ether or of russet apples, exhaled by the patient. All who have written upon diabetic coma, agree that as the physician enters the sick rooms he is saluted by a strong odor of ether. In the single case of diabetic coma which we have observed, we did not perceive the odor. The only time we noticed it was in the case of a diabetic aged seventy years, whose urine was loaded with sugar, and who eliminated daily a large amount of the sulpho-cyanide of potassium. His chamber was strongly scented with ether. The odor remained several days and disappeared, although tests still revealed the presenee of the sulpho-cyanide.

The diabetic with acetonæmia dies in one of two different ways. He may succumb quickly in diabetic coma, dying in one to five days. To effect this rapid termination two conditions are essential:

1. The urine must give the reaction of Gerhard, a red brown, from the addition of ferric perchloride. The sulpho-cyanide must be present in appreciable quantity. Coma is in our opinion the result of the accumulation of this salt in the system.

2. The patient must be exhausted. A railroad journey. with insufficient or improper food or drink, is often sufficient to produce

this condition. The rarity of diabetic coma is shown by the fact that scarcely fifty cases are on record.

The diabetic with acetonæmia may die more slowly of phthisis pulmonalis. The tubercular process undoubtedly contributes to the emaciation and functional decay of the diabetic, but generally, the emaciation and debility precede the appearance of the tubercles.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, Tuesday, October 5th, 1886.

Reported by Dr. H. G. Matzinger.

The President, Dr. W. W. Potter, in the chair.

The paper of the evening, entitled "A Further Study of Tubercular Disease of Bone, and its Early Operative Treatment," was read by Dr. R. Park. It will be published in full in a later issue.

Discussion— Dr. Hayd said he could not but feel that not all cases of hip joint and synovial disease are tubercular, because so few of them result in an abscess, that fact seeming to show that they were not tubercular. He believed in the use of the actual cautery; having seen many good results from its use in scrofulous glands, he did not know why it should not be good in bone trouble of the same nature.

Dr. Hartwig had seen recovery take place in cases that seemed necessarily fatal. He had never practiced ignipuncture as yet, but knew of its being used in Germany to destroy the membrane in diphtheria, and cause healthy granulations, on the principle that —according to Billroth—granulating surfaces do not absorb. The Doctor believed that anybody may become tubercular; that the bacillus tuberculosis occurs in the blood of everybody, and a vulnerable spot is affected by it. He had grave doubts as to whether tuberculosis can be cured outright.

Dr. Wheeler said that he had no experience with ignipuncture, but it occurred to him that applying it through the soft tissues laid it open to the objection of giving fresh surface for infiltration.

Dr. Clark had no experience with ignipuncture. Thought that joints can become inflamed without being tubercular. Had seen cases of hip disease get well; the father of one having phthisis. The Doctor, however, believes in tubercular disease of bone, and thinks that the time is not far distant when the men who now scoff at the idea will be effectually silenced.

Dr. Heath said that he had learned a great deal from the paper; that he had no experience with ignipuncture; fifty per cent. of his hip cases died, none having a tubercular history. Still, he did not doubt that they were tubercular.

Typhoid fever was reported very prevalent.

It was announced that Dr. Davis would read a paper on a surgical subject at the next regular meeting.

Selections.

THE SIGNS OF EARLY PREGNANCY.

In the practice of the gynæcologist, in particular, it is frequently necessary to be positively assured of the non-existence of pregnancy before instituting such local treatment as the exigencies of the case seem to require. In the absence of such assurance, the sole course open to him is to defer treatment for a variable period of time, until the rational history or repeated vaginal and conjoined examination lead him to think that the case is one where treatment, as far as the interior of the uterus is concerned, is contra-indicated, until the ovum, which he finally concludes is probably contained within this organ, has reached maturity and been expelled. Is there any diagnostic sign by means of which, at the first local examination, the existence of pregnancy may be determined with almost positive certainty as early, even, as the fifth week of utero-gestation? Such a sign is offered to us by Hegar, and Dr. E. H. Grandin (*Medical Record*, February 27, 1886) during the last eighteen months has had frequent opportunity of putting the value of this sign to the test, and has by means of it been able to assert as early as the fourth to the sixth week that gestation existed.

During the first six to eight weeks of pregnancy the changes in the uterus are practically limited to the body of the organ. The

uterine body enlarges, especially in its transverse diameter (antero-posteriorly); the muscular substance becomes less dense. These changes are simply the result of the hyperæmic condition into which the corpus is thrown and kept by the engrafting of the impregnated ovum. As the result of such changes, the uterine body loses its nulliparous pear shape; its contour no longer gradually diminishes as it approaches the uterine neck; the body, on the contrary, bellies out over the cervix in all the transverse diameters, in particular, antero-posteriorly, and the organ, instead of being pear-shaped, resembles very much an old-fashioned, fat-bellied jug.

The above changes in the consistency and shape of the body of the uterus constitute Hegar's sign, and so far, at least in a dozen cases, it has never, according to Dr. Grandin, failed in early diagnosis. The obtaining of this sign requires, of course, a certain expertness in the bimanual palpation, and familiarity with the sensation communicated to the finger by the nulliparous uterus, and the uterus altered pathologically in one or another way. Dr. Grandin has found, however, in his clinical teaching but little difficulty in making even inexpert fingers conscious of the change. In the vast majority of cases, owing to the normally slight anterior curvature of the uterus, the internal examining finger will note this sign to the best advantage in the anterior cul-de-sac. Here the finger, instead of following the line of the cervix in a gentle curve up on to the body, is at once conscious of the body swelling out to a greater or lesser degree, according to the date of impregnation, over the cervix, and at the same time, bimanually, the body is faintly boggy, resilient, compressible. If such be the condition of affairs detected by the local examination, in the absence of rational history, in the absence of slight softening at the tip of the cervix (which may, if present, mean erosion), and of mammary signs and blue discoloration of the vagina (both of which, if present, may mean ovarian disease), Dr. Grandin now unhesitatingly pronounces the patient pregnant. The question arises, Are there other conditions which simulate the above sign? There are two which might, — distended bladder, and uterus distended by menstrual blood. Neither of these conditions ought, ought, however, to given rise to error, for a necessary prelude to a careful bimanual is evacuation of the bladder by means

of the catheter; and retained menstrual blood in the uterus, if not accomplished physically by imperforate hymen or vagina, would necessarily be suggested by the history (no ground for falsifying here) before sufficient had collected to give rise to even faint fluctuation. Hyperplasia of the corpus uteri cannot simulate this sign, because in this condition the conjoined touch reveals density; sub-involution cannot, because here the uterus is increased in its longitudinal as well as in its transverse diameter and conjoined touch, while revealing heaviness and softness, does not reveal resiliency and compressibility. The markedly anteflexed corpus uteri, hyperæmic from obstructed circulation, is most likely to simulate Hégar's sign, but in case of such distortion the feeling of resiliency and compressibility is also lacking. In marked retroversion this sign is likely to fail on account of the difficulty of palpitating with ease the uterine body.—*Therapeutic Gazette.*

General Emphysema after Rectal Injury.—In the *Australian Medical Journal* (June 15, 1886), Cooke reports a case of traumatic recto-urethral fistula, which healed two completely, and left a stricture of the urethra which necessitated internal urethrotomy. After the operation a catheter was left *in situ* for five hours. On the next day patient had a chill, and on the second day a condition of emphysema was noted, which involved the entire trunk from limbs to the jaw. The following day the patient died. Post-mortem section revealed a small opening by which the membranous portion of the urethra communicated with the rectum at the site of the incision. It was thus made clear that flatus had escaped from the rectum into pelvic cellular tissue, and thence under the skin of the entire trunk. A similar case is given by Ericksen, in the second volume of his treatise on surgery.

In the Vienna hospitals some form of tuberculosis is found in nearly 70 per cent. of the deaths. The treatment of acute diseases is generally expectant, and in typhoid fever, milk and other liquid diet is used. Previous to 1879, when the city obtained its water from the Danube river, typhoid fever was almost epidemic in Vienna. In that year they put up new water-works, and since that time not one case has developed in the city. * * *
A bacteriological laboratory is connected with the pathological department, and cultivation of bacteria are made from typhoid fever, pneumonia, erysipelas, glanders, septicæmia and other diseases. Experiments with bacterial cultures are made upon lower animals. Nearly every department of the hospital now has a bacterial laboratory, and the search for new forms and confirmation of already discovered bacteria goes on with enthusiasm.—*Exchange.*

THE *Chemist and Druggist* has the following touching "Lines to a Timid Leech:"

Nay, start not from the banquet where the red wine foams for thee,
Though somewhat thick to perforate this *epidermis* be;
'Tis madness, when the bowl invites, to linger at the brink;
So haste thee, haste thee, timid one. Drink, pretty creature, drink!
I tell thee, if these azure veins could boast the regal wine
Of Tudors or Plantagenets, the draught should still be thine!
Though round the goblet's beaded brim plebeian bubbles wink,
'Twill cheer, and not inebriate. Drink, pretty creature, drink!
Perchance, reluctant being, I have placed thee wrong side up,
And the lips that I am chiding have been farthest from the cup.
I have waited long and vainly, and I cannot, cannot think
Thou wouldst spurn the oft-repeated call: Drink, pretty creature, drink!
While I watch'd thy patient srruggles, and imagined thou wert coy,
'Twas thy tail and not thy features that refused the proffer'd joy.
I will but turn thee tenderly—nay, never, never shrink—
Now, once again the banquet calls: Drink, pretty creature, drink!

Book Reviews.

PARALYSES, CEREBRAL, BULBAR AND SPINAL. A Manual of Diagnosis for Students and Practitioners. By H. Charlton Bastian, M. A., M. D., F. R. S., etc. Pp. 671. New-York: D. Appleton & Co. 1886. Buffalo: Ulbrich & Kingsley.

In this so-called manual the author has presented us with almost an encyclopædia of information that can be brought to bear upon the diagnosis of these oft-times obscure lesions. As he has so well shown, this is now a double problem, since we have to determine not only the nature but the locality of the trouble. That is, regional as well as pathological diagnosis has now to be arrived at. With the perplexities which one meets in the attempted solution of such problems he largely concerns himself in this work, and does it, too, in a most happy and interesting way. A little experience with study of this kind demonstrates the great advantage of having a good *method* by which to work. Other things equal, the man with the best method will the quickest come to a conclusion satisfactory to all concerned. That this method must be based on anatomical and physiological data is most evident; consequently one not only pardons the multitude of anatomical details met with in the course

of the book, but finds them invaluable. In addition to the aids thus afforded, the introduction of illustrative cases and the impressive yet unobstrusive way in which they are made to serve the purpose give much greater value to the work. Thus what is said of the internal capsule and its lesions will give the information for which one may look through a large library almost in vain.

We deem the work to be one of immense value, which must add greatly to its author's already large reputation, and we are heartily glad to see it reproduced by an American publishing house.

A Treatise on the Practice of Medicine. By Roberts Bartholow, M. D., LL. D., etc. Sixth edition, pp. 990. New York: D. Appleton & Co. Buffalo: Ulbrich & Kingsley.

That six editions of such a work should be called for in six years is, perhaps, the most flattering testimonial that a book can receive, and must outweigh every other comment, favorable or unfavorable. In the preface to this edition is an announcement which will be welcomed by all of Dr. Bartholow's numerous admirers, namely, that he has now in preparation another work on the Principles of Medicine which, together with the one under review, and his Materia Medica and Therapeutics, shall constitute a trio of volumes, each containing matter complementary to the others. Certainly three such volumes must constitute a monument which will render their writer's fame almost undying.

As we turn over the pages of this work we meet everywhere those admirably concise descriptions of signs and symptoms which give it one of its greatest charms. Of course, so far as treatment is concerned, it is to Dr. Bartholow's book more than to almost any other that one would turn for brief yet satisfactory directions. It is with etiology and pathology that we have most fault to find. In whatever way we may regard the author's acceptance of many of the new views which now assume so much predominance, we still think it his duty, as a writer of a text-book intended to be abreast of the times, not to entirely ignore the work ot the past decade in biological research. A page and a half devoted to the bacillary origin of pthhisis,—two sentences for the comma bacillus of cholera,—these are all the references we note as to a class of investigations that are occupying the best experimentators to-day all over the world. Not

a word concerning the now well-established cocci of erysipelas, although he devotes a section to the disease; not a reference to the spirillum of relapsing fever; no allusion to the intestinal toxæmias of bacterial origin; as far as we can find not a single use of the terms leucomaïne or ptomaïne. In the absence of all these we cannot but feel that the author has lost a valuable opportunity to show himself as up with the best thought of the day. We do not criticise his evident disbelief so much as we do his entire ignoring of these topics. Compare his position in these respects with that of his great French therapeutist compeer,—Dujardin Beaumetz,—and our brilliant countryman must suffer.

In all other respects, however, we have nought but admiration for the book, and we hope these defects may be atoned for in the work now in preparation, which we await with no small interest.

The publishers have done their work well, and the book is one which will adorn the place it should fill in every physician's library.

Von Ziemssen's Handbook of General Therapeutics. Vol. V. General Orthopædics, Gymnastics and Massage. Hydro-therapeutics. Pp. 624. New York: Wm. Wood & Co. Buffalo: J. H. Matteson.

The fifth volume of this notable work displays the same elaboration of detail and the same careful preparation which have been so conspicuous in its predecessors. The first half of the book, by Prof. Busch, of Berlin, deals with General Orthopædics, Gymnastics and Massage, and is certainly an essay of exceeding interest. The comprehensive historical study, to which he has devoted over forty pages, would be out of place in the ordinary text-book, but here it serves a most useful purpose, and displays an almost phenomenal devotion to such research. Dr. Busch has gone over ground of no small importance to the surgeon and especially to the orthopædic specialist in considering the treatment of many congenital and acquired deformities.

Indeed, this work, ostensibly devoted to therapeutics, contains a great deal not to be found in any treatise on surgery. After full discussion of the instrumental and general treatment of deformities there follow some exceedingly plain and readable hints about the employment of gymnastics and massage.

The second part, devoted to Hydro-therapeutics, is by Dr. Winternitz, of Vienna, who is regarded as the leading exponent of this line of treatment in Europe. It is a careful physiological study of the value of hot and cold applications in abnormal conditions, and will be read with interest even by those who have no kind words for the method of treatment itself. He at all events makes it very clear that by use of water at various temperatures ennervation and circulation may be influenced in very marked degree, and that heat processes—both production and discharge,—may be well-nigh voluntarily controlled; that tissue nutrition and metabolism may be very materially affected,—and, after all, what more can we ask of any therapeutic agency?

A Treatise on Electrolysis, etc. By Robert Amory, A. M., M. D. Pp. 307. New York: Wm. Wood & Co. Buffalo: J. H. Matteson. 1886.

This is altogether the best special book devoted to the subject that there is in the market. Intended as a treatise by itself the author has been compelled to devote a part of it to the exposition of the facts of chemistry, physics and biology, without an understanding of which no good electrolytic work can be done. In any work of this kind it is expected that there will be statements of results to which the general practitioner will hardly aspire. Thus while in isolated cases the disappearance of inoperable malignant tumors may be achieved by electrolysis practiced by an expert, it is hardly to be expected that it will thus succeed in the hands of every one. Nevertheless it is only by general effort that progress can be made in this direction, and reports of such cases may serve to stimulate further attempt. Surely Apostoli's success in dispersion of large uterine fibroids must excite much work of a like nature.

Throughout the book the directions seem sound and intelligible, such as we would expect of its accomplished author; and it may serve as a most explicit and welcome guide for all such work.

Rheumatism; its Nature, Pathology and Successful Treatment. By T. J. Maclagan, M. D. Pp. 277. New York: Wm. Wood & Co. Buffalo: J. H. Matteson.

This new book of Dr. Maclagan's is an extensive elaboration of a paper presented by him to the British profession in 1876, on the subject of salicin as a remedy in acute rheumatism. It is fur-

thermore devoted to the malarial or miasmatic theory of rheumatism, which he considers as more closely allied to intermittent fever than to any other disease. Concerning the nature of malaria he gives some very suggestive facts while not committing himself to any positive explanation. Nevertheless he takes this rather advanced position, "that the balance of evidence and authority favors the view that malarial poisons are minute organisms. Such being the case we shall assume that they are so, and shall proceed to investigate the probable mode of action of such organisms on the system."

After a consideration of the symptoms, etc., of rheumatism, he concludes by an extensive discussion of the action of the salicyl compounds and their therapeutic uses in rheumatic complaints.

THE HEALING OF ARTERIES AFTER LIGATURE IN MAN AND ANIMALS. By J. Collins Warren, M. D., Assistant Professor of Surgery, Harvard University, etc. 184 pages, with 12 full-page plates in black and colors. New York: William Wood & Company. Price, $3.25.

"What the invention of printing was for science, or that of gunpowder was for war, or that of the locomotive for international intercourse, such was the discovery of the ligature for the surgeon." With this quotation from Diffenbach, the author opens one of the most scholarly and interesting monographs we have ever examined. While the historical sketch, which occupies forty-six pages, makes it clear that the ligature has been known since the beginning of the Christian era, and had been studied in an inconsequential way by many surgeons, even up to the very time of Paré, we know of no such comprehensive and exhaustive study of the subject as this, in any language or of any date. A chapter of nearly forty pages is devoted to an experimental study of the nature of repair of arteries after ligature. This is followed by one devoted to ligation of vessels in man, in which the details of many museum specimens are carefully noted. Chapter IV. is devoted to the closure of the fœtal vessels, each constitutent of the peculiar fœtal vascular arrangement being taken up separately. In the closing chapter is given a summary not only of the foregoing chapters, but of our best methods and ligature materials; some exceedingly important practical hints which it contains make this of importance to every one who dabbles in surgery.

A bibliography of two hundred and thirty-five titles is appended, arranged in historical order, which alone would make the work one of great importance. An excellent chromo-lithograph and twelve plates give the book still greater value.

Altogether, then, we congratulate the author upon a memorable addition to literature, and the publishers upon a most creditable volume.

HANDBOOK OF DISEASES OF THE EAR. By Urban Pritchard, M. D., F. R. C. S. Pp. 207. 1886. Philadelphia: P. Blakiston, Son & Co. Buffalo: Peter Paul & Bro.

In this small volume Dr. Pritchard has been able to present a practical manual, yet of reasonable compass, in which the various lesions of the ear are happily described, and their differential diagnosis made as clear as their natures will permit. His judgment both as to diseased conditions and their brief description is excellent, while he points out their proper treatment with excellent discrimination. The anatomy and physiology of the ear are not overlooked; and an interesting chapter is added concerning the education of deaf-mutes. There are also some very serviceable remarks about aids to hearing, trumpets, audiphones, etc.; and the book is concluded by a useful formulary.

Though not nearly so large as some of the special treatises, it is likely to find increased favor among students on that account.

A LABORATORY GUIDE IN URINALYSIS AND TOXICOLOGY. By R. A. Witthaus, A. M., M. D. Pp. 75. New York: Wm. Wood & Co. Buffalo: Peter Paul & Bro. 1886.

Prof. Witthaus, who as author, chemist and teacher is so favorably and widely known—especially in this State—has prepared, for the use of students and practitioners, a guide both for approximate and exact analysis of urine and the more common poisons, which excels in conciseness and convenience anything of the kind heretofore published. Not one word is wasted, nor does it contain one which is superfluous; while yet everyone, save perhaps the professional chemist, may find in it everything which he needs in the way of directions for work. The work is presented by the publishers in most convenient shape for pocket and table, with each alternate page blank for notes, and must help to extend its author's international reputation.

THE MECHANISM OF INDIRECT FRACTURES OF THE SKULL. By Chas. W. Dulles, M. D. Pp. 55. Philadelphia: P. Blakiston, Son & Co. 1886.

This most entertaining monograph is a reprint from the Transactions of the College of Physicians and Surgeons, and gives not simply a resumé of our knowledge, but the results of careful study and experiment on the author's part, with a critical discussion of some of the still mooted points concerning the resistance and elasticity of the skull. Some twenty-seven illustrations accompany the text and enhance its value. We are glad to see Dr. Dulles' paper thus issued in separate form and so made accessible to the many who ought to possess and study it.

BOOKS RECEIVED.

From D. Appleton & Co., New York, through Ulbrich & Kingsley:
Paralyses, Cerebral, Bulbar and Spinal: H. CHARLTON BASTIAN.
Practice of Medicine: ROBERTS BARTHOLOW.

From P. Blakiston, Son & Co., Philadelphia, through Peter Paul & Bro.:
Diseases of the Ear: URBAN PRITCHARD.
Indirect Fractures of the Skull: C. W. DULLES.

From Wm. Wood & Co., New York, through Peter Paul & Bro. and J. H. Matteson:
Laboratory Guide in Urinalysis and Toxicology: R. A. WITTHAUS.

From Geo. S. Davis, Detroit:
Antiseptic Midwifery: H. J. GARRIGUES.

From Lea Bros. & Co., Philadelphia:
Medical News Visiting List, 1887.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge*. Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

To Exchange.—Vols. 2 and 5 of *Science*. Address the Editor.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

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ON THE SPEEDY DETECTION OF POISONS.

By Theodore Deecke, M. D., Utica, N. Y.
Special Pathologist to the State Lunatic Asylum.

[Read before the Utica Medical Library Association.]

The paper which I have to present to-night is of a practical value, merely, although the facts, of which I intend to give an account, are chemically of high scientific interest. I shall endeavor to describe to you some simple methods by the employment of which in cases of suspected poisoning the presence of a number of poisonous drugs may be detected with the utmost speed and with a high degree of certainty. This is of importance, since the symptoms observed in cases of poisoning are in general not so well defined and characteristic as to permit of promptly making a correct diagnosis. It is still more difficult to trace the symptoms to the action of any particular poison. Many of the best marked are also symptoms of disease, and the fact that the mode of action of most poisons is twofold, viz., local and remote, renders it possible that a number of the symptoms manifested are common to the action of different poisons, for which reason their specific effects often appear less pronounced.

The first thing to find out, is whether a morbid affection justifies a presumption in favor of poisoning, or not. There are, in most cases, only three circumstances which afford this presumption, namely:

1. The sudden appearance of the morbid symptoms.

2. The occurrence of the symptoms in a person otherwise in good health.

3. The appearance of the symptoms soon after taking food, drink or medicine.

Of these, the latter affords the strongest presumption, and especially when an attack occurs in several persons simultaneously by

similar severe symptoms. If in a single person, however, all the characters mentioned should be received with caution and carefully weighed, and perhaps only the joint occurrence of all of them, though not decisive, would justify a very strong suspicion.

It is the general rule in cases of suspected poisoning to make all possible efforts to remove the poison in substance by mechanical means, as the stomach-pump, or the administration of emetics. Where this cannot be done, as in poisoning by acids and alkalies, the agents leave unmistakable traces of their presence in places accessible to immediate examination whereby the nature of the poisons can be promptly recognized and measures be taken to neutralize their effects. The larger the number of poisons, however, and especially those which are most commonly "*taken* by or *administered* to" the person injured, are not apt to leave any visible traces behind. They are even, with the exception perhaps of strychnine and phosphorus, not marked by any specific taste or odor, which could not be covered easily. They arouse suspicion only after having reached their places of destination and after their injurious action has commenced. And yet, after the general means of treatment to be resorted to have been exhausted, the subsequent special measures to be taken are left to the, often quite vague, judgment of the physician in attendance, although, as statistics show, in the majority of cases, it is in the *latter prominently* that the true safeguard lies for the possible final recovery of the victim.

By this, subsequent special treatment is understood, besides the employment of emulcent and mucilaginous drinks, milk, etc., in order to diminish the solvent power of the stomachical fluid and to prevent the spread of the local inflammatory action of the poison; first of all the administration of the proper antidote, or, in conformity with the chemical principle, "*Corpora non agunt nisi fluida*," of remedies which by special affinity to the poisonous agents are capable of converting the same into insoluble compounds, or at least such as are less soluble than the original.

It is evident that, in order to accomplish this, the physician by all means should know what he is about. He should be informed of the nature of the poison with which he has to deal. The only satisfactory information that can be furnished is by chemical and

perhaps microscopical analysis of the food known to have been partaken of by the sufferers; of the vomit matter; the saliva taken from the oral cavity, and the contents of the stomach removed by the stomach-pump. Besides, it is essential that he receive this information most speedily, for the longer even traces of the poison are allowed to remain and act in the digestive tract, the greater is the danger of their absorption in fatal quantities, which are in fact, as recent investigations have shown, much smaller than has hitherto been admitted.

The poisons which come especially into consideration are of course those most frequently met with. They are compounds containing arsenic, copper, mercury, antimony and phosphorus. According to statistics carefully collected, the average percentages of cases of poisoning by these as compared with others, are as follows:

Arsenic and its preparations	71.02
Copper	7.03
Mercury	5.35
Phosphorus	3.11
Sulphuric acid	2.14
Nitric acid	1.42
Nux vomica (strychnia)	1.78
Opium (morphia)	1.42
Antimony	0.71

In ninety-three cases which have come to my personal knowledge —not collected from published records—during a period of about twenty-seven years, there were: Forty-eight of arsenic; eighteen of copper; eight of mercury; four of phosphorus; two of antimony; three of strychnia; two of prussic acid—cyanide of potassium; one of oxalic acid; one of liquid ammonia; one of sulphuric acid; two of kerosene oil, etc.

The figures, as will be observed, are subject to great variations; but they show in general the great preponderance of those mentioned above. Now it is a fact that especially for these we possess the most effectual antidotes, if there be only an opportunity offered of having them administered in time. It is not too much to say, therefore (and I have had some experience in this matter), that, if the means of speedy discovery of the poisons employed were more widely known and more frequently resorted to, this would greatly increase the cases of successful combat with these enemies of life.

The opinion commonly entertained, that this could not be accomplished without great skill and great expense of apparatus, of time and labor, is untrue. The manipulations are very simple; the results almost absolutely decisive and all the operations and tests required can be performed in from five to not more than perhaps fifteen minutes. The apparatus, of which I shall give you a list, is anything but complicated. It consists of: 1, test-tubes, five to eight inches in length; 2, small glass tubes of narrow bore, made of hard melting glass, so-called reduction tubes; 3, flasks from two to six ounces capacity; 4, long glass tubes bent twice at a right angle, with one short and long arm, the former provided with a perforated cork that fits into the flasks; 5, hydrochloric acid; 6, sulphuric acid; 7, liquid ammonia; 8, small strips of copper foil; 9, small strips or sticks of zinc; 10, small strips of tin-foil; 11, strips of polished iron; 12, a shallow platinum capsule; 13, distilled water; 14, a porcelain or glass mortar; 15, spirit-lamp, or Bunsen burner with gas supply; 16, double lenses, magnifying from 15 to 120 diameters, or a microscope.

All the articles mentioned are at hand probably in the smallest chemical laboratory. Two precautions, however, regarding the same should be scrupulously observed, viz.: First, that all the chemicals, the acids, the metals, etc., employed are tested, that they are chemically pure, before they are set aside for their special destination. The acids are always apt to contain traces of arsenic; ordinary commercial copper is often alloyed with minute quantities of arsenic or antimony, or both; zinc with arsenic in considerable quantity, if not very carefully purified. The second precaution is, never to use any of the glass tubes or vessels, or the chemicals and metals, with the exception of the platinum capsule and the mortar a second time for the same purpose.

The manipulations and the course to be followed are explained in a few words. If there is no special indication for the presence of the one or the other poison, the rule should be: first, to test for arsenic, and, secondly, for mercury, since the operations for the detection of both metals are the same; thirdly, for copper; fourth, for antimony; and fifth, for phosphorus.

The substances to be examined are, as mentioned above, either articles of food, solid or liquid; or vomited matter; or saliva from

the oral cavity; or those removed from the stomach by the use of the stomach-pump. Liquids ought to be at all times well shaken up before a sample is taken for examination: if any deposit in the same is observed, a small quantity of it, drawn up by the use of a glass tube, should be added to the sample. Solid or semi-solid matter should be finely divided in a mortar, if necessary, by adding a little distilled water. Of the vomited matter and the removed contents of the stomach, as much as possible should be thoroughly mixed and triturated in the mortar before a sample of it is taken for examination. All these operations, necessary as they are, will occupy but a few minutes.

The tests for arsenic and mercury are as follows: A small portion of the substance to be examined is placed in a test-tube which is to be about one-third filled with hydrochloric acid. A slip of copper-foil is introduced and the whole gently heated to the boiling point and kept there for about ten or twenty seconds. If one or the other or both of the metals are present, the copper-foil will at once be seen coated with an iron-gray or black deposit. The strip of copper-foil is then removed from the acid, washed in distilled water and dried by the aid of filtering paper and the heat of the lamp. Small strips cut off from those places, where the deposit appears to be the thickest, are then introduced into a reduction tube and exposed first to a gentle and finally the full heat of the lamp, by taking care that only the lowest end of the tube containing the copper strips is exposed to the flame. In case the deposit contains arsenic or mercury, vapors will arise and be condensed and deposited in the upper, cooler portion of the tube, forming a thin grayish or white sublimate. If this is examined by the aid of a magnifying lens or under the microscope, it will be found to consist either of small octohedral crystals, or of small shining globules. In the first case, the sublimate consists of arsenious acid, formed under the influence of the heat by the action of the oxygen of the atmospheric air upon the metallic arsenic, deposited on the surface of the copper-foil; in the second case, of mercury simply sublimated or distilled over from the lower to the upper part of the tube. Both tests are reliable and conclusive, and will indicate the minutest quantity of both metals, even if the surface of the copper-foil should have undergone only a slight discoloration.

The test for antimony is quite similar to the foregoing, but the substance to be examined should be first boiled in the acid mixture, which in this case should consist of about one part of hydrochloric acid to five parts of the watery fluid, and then the strip of copper-foil be introduced. If antimony is present in very small quantity, the copper will acquire a reddish or violet-colored deposit on its surface; if in large quantity, the deposit will be gray with a metallic lustre or in the state of a loose black powder. If these deposits are heated in the reduction tube, they do not yield octohedral crystals like those obtained from arsenic, or strychnine globules as those obtained from mercury. Another and equally rapid process of detecting antimony, is the introduction of a strip of pure tin-foil into another portion of the acid mixture, so diluted that the hydrocholoric acid forms only $\frac{1}{10}$ part by measure. If antimony is present, the tin is covered, without the aid of heat, almost immediately with a black deposit of metallic antimony. If the results of both tests of which the one does not occupy more time than the other, coincide, there is no room for doubt as regards the presence of the metal.

For the presence of copper, also, two tests simultaneously should be made. The one consists in introducing a strip of polished iron into the liquid mixture or fluid to be examined after it has been slightly acidulated with sulphuric acid; if copper is present, the iron will speedily be coated with a red layer of metallic copper. If the coated iron-strip is immersed in ammonia and shaken with air, the fluid will at once assume a blue color. For the second, the galvanic test, a small quantity of the acidulated mixture is placed in a platinum capsule and the platinum surface through the solution touched with a slip of zinc-foil, when metallic copper, if present, will be immediately deposited on the platinum surface. When the quantity of copper is very small, there is merely a brown stain, but a blue liquid is obtained from it by treating it with ammonia as described in the former test. These tests are likewise as fine and decisive as any which the science of chemistry has furnished.

The test for phosphorus, if its presence is not detectable by the peculiar odor of its vapors—a test, however, not quite reliable if the mixture contains smelling vegetable substances—requires a trifle

more time than those described above. But it is as subtile and conclusive as any of the others. The liquid mixture to be examined, to which a small quantity of sulphuric acid is added, is introduced in one of the flasks, to about one-third of its capacity. One of the twice-bent glass tubes is attached to the flasks, the long arm of the same being immersed into a small vessel containing water, and the contents of the flasks heated to the boiling point. If phosphorus be present, either in substance, as in the heads of matches, or in solution, the vapor arising from the boiling liquid and condensed in the glass tube appears luminous. The most absolute darkness of the room in which the test is made is required for the success of the experiment. The process is a simple one of liberation and distillation of phosphorus in substance, of which small particles will be discovered at the bottom of the water into which the condensing tube has been immersed. But even the slightest luminosity of the vapors that is noticed, is a conclusive proof of its presence.

It is the great advantage of all the tests described in the foregoing, that the presence of organic matter, of whatever kind it may be, does not interfere with their delicacy and the correctness of their results.

I may add that the detection of strychnine—considering the circumstances under which poisonings with this substance occur—is likewise connected with no difficulty. The so-called color-test with sulphuric acid and ferri-cyanide of potassium, bichromate of potassa, black oxide of manganese or protoxide of lead, is speedily executed, very characteristic, and indicates the smallest quantity of the drug when it can be procured in substance. If in solution, a few drops evaporated to dryness suffice. Of the three cases which have come to my observation, in two the drug was administered by mistake instead of chinin in the one and morphine in the other. In the first case, about one grain had been taken in solution; in the second, one half of a grain. Both persons recovered, the former under instantaneous vomiting, produced by the excessive bitter taste of the medicine. The antidote employed was tannin and chloroform inhalations. The third case was one of poisoning with the consent, as it seemed, of the victim, in whose bed a half-ounce bottle was discovered containing a few drops of a solution of strychnine and about three grains undissolved crystals of the same.

Of the other cases enumerated above, there recovered: Of the forty-eight of arsenic, nineteen; namely, thirteen by the use of freshly-precipitated oxide of iron, and six of dialyzed iron. In one case of a woman some fifty-two or fifty-three years of age, the large dose of iron brought about once more a copious menstruation after it had ceased over eight years before. Of the eighteen of copper, all but one, which was a case of malicious chronic poisoning. The treatment was, continued emetics followed by albuminous drinks. Of the eight of mercury, only one, by the use of egg albumen. Of the four of phosphorus, two, by the use of large quantities of mucilaginous drinks and emetics. Of the two of antimony, one; treatment unknown. Of the other cases mentioned, all, with the exception of the two from kerosene oil, proved fatal.

ANOTHER CASE OF HEREDITARY CHOREA.

BY CLARENCE KING, M. D.
Machias, N. Y.

Chorea, in its ordinary form, is a quite frequent disease, and it is not uncommon to meet with instances where heredity is markedly present as a predisposing factor. But hereditary chorea, as a distinct malady, is very rare, and has only been recognized and brought to the attention of the profession in comparatively recent times. Its true pathology and nature are wholly unknown and it will probably be many years before they are fully understood, if they ever are. The literature of the disease is extremely meagre, the following being all the cases yet reported, to my knowledge, exclusive of my own: C. O. Waters, in Prof. Dunglison's *Practice of Medicine*, third edition, vol. II., p. 216; George Huntington in *The Medical and Surgical Reporter*, April 13, 1872; and Peretti in No. 52 of the *Berliner Klin. Wochenschrift*, 1885. Hence, as every new case must be of inestimable value in establishing the identity and true nature of the disease, I submit the following additional case which recently came under my observation:

Albert S., a resident of Cattaraugus County, was brought by the poormaster of his town to the County Insane Asylum, alleged to be

suffering with insanity. Upon examination he was found to have hereditary chorea in its most advanced stage. The following history was obtained: The patient was fifty-six years of age and had been slowly developing this disease for more than fifteen years. It had been noticed that the advance was not always with the same rapidity, being some years considerably more rapid than others, yet no cause could be assigned for this variation. Its course, however, was constantly onward. The patient's father died from chorea at the age of sixty-five years, having suffered for many years. None of his (patient's father's) brothers or sisters had chorea. The patient's paternal grandfather was afflicted with hereditary chorea for many years and died from its effects at about fifty-five or sixty years of age. Beyond this neither the patient nor his friends were able to give any trustworthy evidence as to his ancestry.

The patient had one half-brother (same mother but different father) and ten sisters. One of these sisters, age about sixty, has been afflicted with chorea for many years, "probably near on to twenty years," and is now living in Michigan. She has never been married. The others of his father's family, who lived to reach the age at which the disease is developed, have all escaped, as have also their children. The patient himself has had four children, the eldest now twenty-five, but none of them show any indications of the disease. It will be noticed, however, that in this family the most favorable period for its development is not reached until after the fortieth year.

This patient, at the time he came under my care, was unable to walk without assistance, and the muscles of his whole body jerked almost constantly. These motions, however, could be momentarily held in abeyance by a strong effort of the will, yet they reappeared immediately, and for a time were much more severe than before the effort to check them was made. His speech was seriously affected and it was only with difficulty that his conversation could be understood, portions of it being entirely lost, while other sentences could be spoken quite naturally,—his speech depending entirely upon the presence or absence of spasm in the muscles of articulation. His bowels had a tendency towards looseness, yet he had not more than two or three passages a day. Although suffering from no distinct

hallucinations, yet from certain strange and insane actions he had been considered for a long time to have mental disease. He was somewhat emaciated. His rest at night was good and refreshing, and he frequently fell asleep during the day-time. If awakened from his sleep he would start up suddenly with an intense spasm of the flexor muscles of his body which would raise his shoulders and feet from the bed. His head at the same time would be jerked backward and his hands and fingers drawn out of all natural shape. After this sudden outburst of choreic phenomena he would regain comparative composure and it would be several minutes before the spasms would become developed in their ordinary force and rapidity. Then they would continue almost uninterruptedly until sleep, with its quieting influence, again hushed them to repose.

Elsewhere,* I have published the history of three cases of this disease, two brothers and a sister, occurring in a family which has for years been under observation, and with which (as also with the recorded cases of other observers) this case closely corresponds in all its leading distinguishing features. To recapitulate, then, it will be seen that this is a disease of adult life, being developed after the age of thirty. Heredity is its only known predisposing cause, yet children of choreic parents may escape the disease, and if one generation escapes, it is never developed in their children or descendants. The course of the disease is slow yet constantly progressive and covers a long period of time. The character of the movements is the same in each case, being distinctly choreic, attacking nearly every muscle in the body, and ceasing during sleep. Moreover, treatment does not affect it in the least, and mental decay appears to be a constant feature of the disease after it has progressed for some time.

Another interesting feature in this case was connected with his appetite. From the time that he came under my observation, and, as he stated, for some months previous, to within a short time of his death, he was a glutton in eating, and scarcely seemed able to get enough to satisfy him from one meal to another.† This character-

* *New York Medical Journal*, April 23, 1885.

† In the ordinary acute form of chorea, loss of appetite, disturbance of nutrition and emaciation are usually prominent symptoms, especially if the case is severe or prolonged. And it can be laid down as a general rule that these symptoms are present in all acute disorders. But in hereditary chorea the progress is slow and the system accommodates itself to the diseased state; the slowly increasing demands of nutrition are met as they can not be in the acute form. In the latter form the demand for increased nutrition is sudden, and nature is unable to supply it, as she can only work slowly. Hence, we have emaciation in one form of the disease and not in the other.

istic, I believe, is not mentioned by other observers. In the former cases reported by me, a large appetite was notable, especially in the more advanced case, and the history of the father and grandfather of these patients shows that they also had enormous appetites, but which failed them shortly before their death. But considering the nature of the disease, we need not be surprised at this feature. The excessive molecular waste incident to the constant muscular activity must call for constant and extensive repair to the various tissues, and this repair must be furnished from food taken internally, excepting that derived from the air in respiration. But owing to the great waste in the anatomical elements, the repair must be correspondingly great, and nature indicates its need through an excessively voracious appetite. When from any cause this repair is discontinued or materially lessened in amount, death must soon follow. And it seems natural to conclude that the life of the patient is prolonged for so long a time by a combination of two causes, namely, a large appetite and a providential cessation of the choreic movements during sleep.

After the failure of my patient's appetite when it became evident that his death was near at hand, I sought and obtained from the superintendent permission to remove the brain and spinal cord for study. Dr. H. D. Walker, of Franklinville, an experienced microscopist, kindly consented to assist and examine the specimen and also to submit it to other competent microscopists. I telegraphed him upon the death of the patient and the following day we intended to make our examination. But in the meantime the poormaster arrived, who, in the absence of the patient's friends, refused to allow us to proceed. Hence, this patient's diseased nervous system was buried with his body, without an attempt being made to decipher the hidden story of its abnormities.

TONSILITIS is not a state in Mexico, nor is it a Spanish town in California. It's a trouble, an ailment, a sickness. The greatest danger of tonsilitis is that it is such a sore temptation to a doctor to cut out your tonsils and clip off your uvula, and burn you everywhere down the throat with caustic. "Why, it's nothing," said the doctor's wife; "nothing at all." "No, it's nothing, I assure you," said the doctor. "Why, when we were married my husband cut my tonsils out for me as a wedding present." "Yes, and I cauterize the place on every anniversary."—*San Francisco Chronicle.*

A FEW OBSERVATIONS ON THE COMBINED USE OF COCAINE WITH LANOLINE.

BY ERNEST WENDE, M. D.

Having experimented more or less with lanoline, the new basis for ointments recently introduced into therapeutics by Prof. Liebreich, of Berlin, I found that, owing to its non-irritating properties, to its rapid absorption, and retention by the skin, cocaine could advantageously be combined with it for the treatment of certain disorders. In burns and scalds, I found the local treatment with a lanoline-cocaine ointment very satisfactory. It speedily overcomes the agonizing pain. It is at once soothing and protective. One of the formulæ which I have used for the purpose has been:

℞

Cocaine mur..... 1.00
Lanoline 24.00

thickly spread upon a piece of soft linen or cambric.

Should a more cooling application be desired, which is often so grateful to the sensitive condition in the first and second degrees of Dupuytren's classification of burns, then an addition of water is requisite, the cooling properties depending upon the capability of lanoline to absorb water; and for this means it is certainly the base *par excellence.*

℞

Cocaine mur..... 2.00
Aquæ destill.....
Lanolini āā.....17.00
Cetacei 4.00

Or, probably still better, is a method which I have recently adopted, that is, by first painting the painful surface with a two per cent. solution of cocaine to be immediately followed by a dressing of

℞

Acidi carbolici..... 5.00
Lanolini 95.00

to be spread on lint or some soft cloth. This plan, besides being soothing and protective, has the additional advantage of being antiseptic, which is quite important if discharges are present.

Then, again, the intolerable itching which is often so marked, so annoying and troublesome in pruritus ani can be greatly alleviated on applying

℞

Cocaine mur.....1.00–2.00
Lanolini.....20.00

But as this irritation is generally symptomatic of some disorder as hæmorrhoids, eczema, fistulæ, oxyuris vermicularis, constipation, hepatic affections, etc., therefore, it is always essential, in order to treat such patient intelligently, with a hope of effecting a radical cure, that one first discover its real cause. Simply to allay the itching will not suffice.

Should the suffering be due to eczema, erythema or herpes, then an ointment of

℞

Cocaine mur..... 1.00
Bismuthi subnit..... 2.00
Lanolini 20.00

will not only relieve, but will usually remove this almost unbearable disease.

I may further state, that the small excoriations which so frequently accompany this malady, heal readily on application of the following recipe:

℞

Argent. nitrat....0.50–1.00
Lanolini..... 9.00

270 Georgia Street.

A SO-CALLED CASE OF EPILEPSY.

BY DE LANCEY ROCHESTER, A. B., M. D.
Buffalo, New York.

[Read before the Physicians' Club.]

On August 25, 1883, W. G. E. entered the Buffalo General Hospital with the following history: He was born in England, was twenty-one years of age, and an upholsterer by trade. Had been a healthy boy until three or four years previously, when he had begun to have "fits," which had constantly increased in frequency until, at the time of admission, he had two or three fits a week, sometimes two in the same day. He was sent in by two physicians as a case of epilepsy, with the statement that when he had a convulsion he fell with the peculiar "cry of epilepsy," frothing at the mouth and sometimes biting his tongue.

He had the general appearance and facial expression of a masturbator, and upon being closely questioned acknowledged that he had been in the habit of abusing himself for several years. He was talked to very plainly in regard to the evils of that practice, and, as he was a member of the church, not only the physical but moral results of continuing it were dwelt upon with fervor.

He promised to desist—was put in the ward and watched as closely as possible to see if he would stick to his promise. He was also given tinct. assafœtidæ, m. xv., and ammon. bromidi, gr. xv., three times daily. He seemed to do pretty well on this for three or four days, but then for two days in succession he had severe fits again. One of the house staff had the good fortune to come into the ward one day just as this patient began coughing very hard; the cough seemed to strangle him, his face became very red and then purplish in hue, and he fell over in a convulsion. After he came out of this he was asked whether his previous convulsions had ever come on with coughing, and he replied that they always began that way.

Accordingly his throat was examined to see if any local cause could be found for the spasm of the glottis, which evidently began his convulsions. A simple inspection of the pharynx revealed the cause: the uvula was exceedingly long, so long in fact that even when the tongue was forcibly depressed and the patient breathed through his nose, thus letting the velum palati hang in its natural position, the end of the uvula was invisible, hanging down behind the epiglottis. This would tickle the larynx, patient would try to cough up the irritant, and the more he tried the greater the irritation would become, finally resulting in spasm of the glottis and then general convulsion. The indications were followed out; the uvula was cut off, and from that day to this the patient has not had a convulsion. He remained in the hospital three weeks after the operation, on the assafœtida and ammon. bromide treatment; but the cessation of the convulsions following immediately upon the operation allows, I think, the conclusion that uvulotomy was the cure of the so-called epilepsy, for which he had been sent to the hospital.

I report this case simply to call your attention to the fact that all cases of convulsions in the adult are not due to epilepsy or hys-

teria, and that sometimes the cause may be found by a simple inspection of the pharynx, and removed by the simplest of operations.

In explanation of the title of this paper, which has been criticised, I would say that it seems to me that the term epilepsy ought to be confined to those cases in which there is some central nervous lesion acting as the cause of the convulsions, and should not be applied to cases that are so evidently reflex in their origin as this was.

IS ERYTHEMA NODOSUM A LOCAL DISEASE?

BY M. A. VEEDER, M. D.
Lyons, N. Y.

It has been the fortune of the writer to meet recently with three cases of erythema nodosum in quick succession. In all of these the bruised and swollen appearance characteristic of the disease was present, but the accompanying general symptoms were different in each case. The patients were all females, and the disease was strictly confined to the vicinity of the ankles.

The first of these cases was of several weeks' standing, and had been called erysipelas by the patient. There was no pain nor heat in the parts affected, but simply a feeling of numbness, and an uncomfortable degree of swelling. Noting the fact that the patient was suffering from irritability of the stomach and gaseous eructations, an attempt was made to correct this condition by the use of dilute muriatic acid and pepsine. The result was prompt improvement not only of the stomach difficulty but also of the erythematous condition.

In the second case in question, there were no clearly defined general symptoms, but there was more pain and swelling than in the one just described. In this case also treatment directed to the improvement of digestion was given a trial but failed. Recurring to an old idea that the disease might be of rheumatic origin, bicarbonate of potash and colchicum were administered. Improvement was at once apparent and all signs of the disease soon vanished.

In the third patient the symptoms that existed in both the previous cases were apparently combined. There was irritability of

the stomach accompanied by nausea and at times vomiting; likewise there were considerable swelling and discomfort in the parts affected. But the treatment that had been used previously failed entirely. At this juncture it occurred to the writer to test a theory in regard to the disease that has recently been advanced.

Contrary to ideas that once prevailed it is assumed that the disease is of local origin, and amenable to local treatment. It is supposed that a germ or micro-organism of some sort is the cause of the inflammation, and the aim is to destroy it by the use of a suitable disinfectant. It is recommended that a mixture of freshly prepared sulphurous (not sulphuric) acid and hot water in equal parts be applied on lint and renewed when cold.

In the case under consideration the patient made this application just once, and then happening to experience some nausea ascribed it to the effect of the remedy's "driving the disease in," and refused to employ it further. Within twenty-four hours, however, all the local symptoms of the disease vanished and have not since returned. The irritability of the stomach still continues, and the patient suffers occasionally from nausea and vomiting.

It will be observed that this series of cases does not settle the question as to whether erythema nodosum is of local or constitutional origin. In two of the cases treatment directed to the improvement of the general condition of the patient was followed by speedy removal of the local disorder. In the third case, however, where general treatment failed entirely, a single local application resulted in an immediate cure. If this treatment had been employed in the preceding cases and failed, the evidence would be complete that erythema nodosum is of a different type in different cases, and is to be regarded as a mere symptom, which may originate from very diverse conditions. In other words, we should be justified in regarding it as being in some instances of local, and in others of constitutional origin.

It has seemed worth while to the writer to present these three cases as suggesting plainly the question as to the essential nature of erythema nodosum, and further to recommend the trial of the sulphurous acid lotion in all cases. Certainly if this treatment gives relief as promptly in every instance as it did in the case described,

it will be a most valuable addition to our therapeutic resources. We shall then be justified in believing that the characteristic lesions in erythema nodosum are due to local infection, inasmuch as local treatment gives relief. Still even though the disease be of local origin it should not be forgotten that there may be absorption of materials capable of producing general symptoms which may require general treatment.

A CLINICAL LECTURE ON ERYTHRASMA.

BY GUSTAV BEHREND, M. D.
Privat Docent, Diseases of the Skin, Univ. of Berlin.

Gentlemen—Von Bärensprung designated by the term erythrasma an affection of the skin presenting a yellow or brownish red appearance, composed of red elevated circles, or patches having a curved, well-defined outline, the surface of which is rough and scaly, and found almost exclusively in these localities of the body where two skin surfaces are in immediate contact.

Therefore, it occurs most frequently on the inner aspect of the thigh—in the male where it touches the scrotum, in the female at the junction with the labia—in the arm-pits, in the folds of enlarged and pendulous breasts of women, and also in the wrinkles of skin produced by a flabby, hanging panniculus adiposus in the lower part of the abdomen of fat individuals. These regions do not only constitute the typical location of the disorder, but they also offer a center for its further propagation, which is accomplished either through continuity whereby the more or less circumscribed periphery gradually extends its boundary, or in a manner that there appear about the border of the original patch smaller ones which slowly increase in circumference until they result in a coalescence with one another. In this way these patches may attain a very large size. Instances occur where but a single spot originally confined to the inguino-cruro-scrotal region extends downwards to the knees, backwards over the perineum and buttocks, and upwards overspreading the entire abdomen. However, in some persons suffering from erythrasma seated in one of the named typical localities, there may be observed similar lesions on a more remote portion of

the body, perhaps on the back, neck, or even in the face. These cases are unusual, but nevertheless they are occasionally seen by every dermatologist.

As a rule they are not accompanied by any subjective sensation, yet in rare forms there may be a slight pruritus, and in exceptionally uncommon instances the itching may be so intense as to cause linear marks or small round blood crusts due to scratching, even after covering a large area of the body. Their appearance is the same everywhere. Despite their gradual progress peripherally they show no signs of involution. Their coloration is uniform throughout, and they are covered with fine bran-like, firmly adhering scales which can only be removed as a fine dust by means of your finger nail. Notwithstanding, they may exhibit a display of colors depending upon the age of the patches; while the recent possess a vivid red, the original plays more into that of a yellow, approaching a likeness to pityriasis versicolor, and it is for this reason certain authorities place erythrasma as a medium between it and herpes tonsurans. They even speak of a transition into the latter. But in fact we are dealing with an entirely different malady, as you will see further on.

Von Burchardt was the first to detect in the scales of erythrasma a vegetable fungus. At a later period Von Bärensprung confirmed this discovery, and he, owing to the minute size of its elements termed it the microsporon minutissimum, the spores of which are extraordinarily small, and frequently grouped in clusters. Its mycelium is composed of a ramification of very delicate threads which are often S- or U-shaped in form, and septate mycelial hyphæ give rise to chains of conidia. It is due to the extreme minuteness of its elements, that it can be readily distinguished from the trycophyton tonsurans, Achorion Schönleinii and the microsporon furfur.

Subsequently, Von Hebra described a disease under the name of eczema marginatum, which in fact covered the clinical features of erythrasma. At first he considered it of a non-parasitic nature, but after Pick had proven the existence of a fungus he modified his opinion in so far as to believe that the presence of the parasite, although generally constant, was merely accidental. This view he maintained in spite of the results of inoculation obtained by Köbner,

and especially those of Pick. Köbner, who regards eczema marginatum as a form of herpes tonsurans, and erythrasma a disease *sui generis*, transferred the scales from a case of the latter to a second individual, and in consequence there appeared in the third week a red disk free from papules and vesicles, which at the end of the sixth week had obtained the size of a gulden, becoming circular in outline. Concerning its further course we have no information.

The experiments of Pick were further in detail. He inferred from them that eczema marginatum was a parasitic skin disease with the symptoms of both herpes tonsurans and intertrigo. He recognizes two forms. One which is associated with the formation of vesicles in the periphery answering to herpes tonsurans vesiculosus; the other may be represented as having rather a smooth, scaly exterior with a well-defined wall-like circumference answering to herpes tonsurans maculosus.

Primarily, Hebra only described the first form as eczema marginatum, but later he also included the second, which really showed a greater resemblance to erythrasma as delineated by Von Bärenspruug; while the result obtained by Pick through inoculation, from which he established the identity between eczema marginatum and herpes tonsurans, more properly belonged to the second variety.

Recently Besnier, and still later Balzer, have again agitated the question whether erythrasma in fact was identified with eczema marginatum, or with herpes tonsurans, and this interrogation they both answered in the negative. They did not consider erythrasma the same, and it seems that they regarded eczema marginatum as a form of herpes tonsurans. Therefore, they only spoke of it in relation to the latter, claiming that clinically both were different. As points of differentiation they alluded to the chronicity, to the absence of subjective symptoms, and to the obstinacy towards treatment of erythrasma, but as a more important factor in the differential diagnosis Balzer referred to the tenderness and minuteness of the fungoid elements as compared to the coarse mycelum and large spores of the trichophyton. Whether these features are sufficient to establish a difference between erythrasma and herpes tonsurans may seem doubtful to many, because—

First—The clinical appearances are not always clear enough to

render a distinction between them. In proof of this assertion I may mention the fact that such a skillful dermatologist as Köbner, who considers erythrasma and eczema marginatum as separate diseases, and the latter as a form of herpes tonsurans, described a case of eczema marginatum which Pick as well as O. Simon regarded as erythrasma.

Second—The nature of the fungoid elements, on the minuteness of which dwell all authorities, is likewise an insufficient diagnostic mark. Notwithstanding that, there is no denial of the fact that you never meet such coarse mycelial branches and large spores as are found in herpes tonsurans; but allow me to say that in connection with these gross constituents a greater number of very fine elements exist, which become more prevalent as the disease advances, until finally the coarse threads have entirely vanished. The same may be said to be the case with the spores. From this fact, which is best demonstrated with hair invaded by the trichophyton, it is possible to conclude that the fungus has become atrophied in a certain measure. This is especially the case when the soil upon which they germinate has lost its nourishment by their growth, and as all instances have usually lasted a long time before they are investigated, therefore we contend with the objection that the discovered fungus is an atrophied trichophyton, the more because at present we are in need of more extensive trials of inoculation; for—

Third—The only well-known case of transmission by inoculation is the mentioned experiment of Köbner, the description of which lacked detail. Short as it was, however, it completely corresponded to the clinical picture of herpes tonsurans of the beard, as now raging in Berlin, and which may be seen daily. Precisely the same disc and margin which Köbner described, I saw recently develop upon the arm of an American colleague, Dr. Wende, of Buffalo, N. Y., who inoculated himself according to Prof. Grawitz's epidermic method with the third or fourth generation of a pure culture of the trichophyton. Here it appeared as though the fungus, in passing through the different stages, had lost in vitality; for the patch and its circle, after attaining a certain size, seemed to incline towards a spontaneous involution. No formation of vesicles or papules was observed. Itching was also absent. However, on the other hand

there is a clinical peculiarity which renders them distinguishable. Hebra has already called our attention to it, namely in its progress from the inner surface of the thigh upon the regio pubica, we find no brittleness of the hair as a consequence, which is so characteristic in herpes tonsurans. In other words, the fungus of erythrasma does not invade the substance of the hair as is customary for the trichophyton. Even in the first edition of my manual on diseases of the skin I acknowledged this fact, and to-day I still consider it a very remarkable phenomenon. But let us not overlook the truth that the trichophyton does not, by any means, disintegrate all the hair of the diseased patch. We have frequently seen upon the bearded face spots of the size of a dollar, on which in all probability but two-thirds fractured hair could be found. They who believe in the identity of the two affections shall have the right to the objection that the fungus was atrophied, and for this reason it could not invade the firmer hair.

I have given you these points rather fully, not that I consider these two diseases as identical, but on the contrary I hold that we are dealing with two entirely different maladies, and I believe it my duty to explain all obstacles lying in the way of the question under consideration and possibly to clear up the different views upon the matter. For but recently this question has taken on a new cast.

It is chiefly Bizzozero to whom belongs the credit of having shown that there may be found upon the normal integument various different fungi, and among these are elements precisely like the microsporon minutissimum standing in close relationship with the leptothrix. As the fungi in the majority of individuals failed to produce the phenomenon of disease, he concluded that the fungus in erythrasma was merely a harmless colonization, having nothing whatever in common with the origin of the disease, nor with its clinical character; in short, it had no pathogenic significance.

In opposition to this view appeared Balzer and Dubreuilh, who considered it purely parasitic in nature. They admit the occurrence upon the healthy skin of similar fungi, but never so abundant as in erythrasma. On persons of clean habits only spores could be found, while on filthy individuals, and on those who perspire freely, filaments of mycelial branches were also discovered in limited

quantities. From this they inferred that the microsporon minutissimum owes its development to the perspiration, and to the products of broken-down epidermis, but only so sparingly in number that an irritation of the skin is impossible, but under favorable conditions in persons possessing a predisposition they appear in greater masses which finally tend to the formation of the difficulty, and that upon this parasitic fungus depend its chronic character, its clinical peculiarities, and the possibility of its further propagation.

You see Balzer and Dubreuilh regarded the microsporon minutissimum as due to spontaneous generation, and in this particular they compared it with the mould-fungus which they believe to have a similar origin; while they considered the trichophyton tonsurans to be fungus received from the external world. It will be impossible for those who cannot make up their minds to go back to the contemplation of former times for a *generatio æquivoca* of organized things, as represented by the thread-fungi, to accept this apprehension. You will have to comprehend a great deal less by accepting the modern view that the microsporon minutissimum is more freely developed owing to an excessive secretion of sweat, and a macerated epidermis. Under such circumstances the existing spores on the normal skin find for their growth a more favorable soil than if the surface were dry and provided with a firm epidermis. With this conception of the matter we most emphatically agree, its entire clinical aspect, its course, its mode of spreading, and its therapy all unite to render it a most typical disease of a parasitic nature.

Now, as we stated at the beginning that erythrasma originally is always seated in localities where two skin surfaces are in habitual contact, thus, in reference to its pathogenic and clinical signification, we are compelled to express the opinion that erythrasma starts as a simple eczema intertrigo upon which settle secondary fungi, converting the primary disorder into the character of a parasitic lesion in its furthur course. So, that if the microsporon minutissimum fungus found upon the normal skin comes in contact with the lesion, then the disease will take on the symptoms of erythrasma as described by Von Bärensprung, but if the trichophyton tonsurans be transmitted, modified by an existing eczma, then the disease in character will be represented by an eczema margina-

tum, as set forth by Hebra. With this understanding of the matter it will be possible to dispose of all contradiction thus far made. This fact will not even act as a hinderance, as their clinical appearances closely approach one another—both having the same lesion in common; that is their development out of an ordinary eczema.

Regarding the treatment of erythrasma, all dermatologists place stress upon its obstinacy and its resistance to all therapeutic measures. This circumstance was given by Hebra as evidence in behalf of its non-parasitic character. Embrocations of soft soap, or with spiritus japonatus calinus; the usual tar unctions—tar and soap, either dissolved in spirits or compounded with fat in the form of an ointment; ointments of sulphur or sulphur and tar, as Wilkinson's ointment; naphthol, and solutions of corrosive sublimate. These are the remedies in general use, and if continued long enough will eventually eradicate the evil. Yet there is a medicine which works with greater precision than these, removing the disease in as many days as they require weeks. I refer to chrysarobin and goa-powder, which I employ in the shape of an ointment (1:10). The latter does away with the idea that the disease is obstinate. Although these remedies are of recent date, it is remarkable that one should forget that in their home they were originally employed against these forms of disease; but it was only through their great efficacy that they attracted the attention of the European physician.

OTORRHŒA.—Dr. G. B. F. Brunetti of Venice, gives the case of a physician, aged forty years, who had suffered for thirty-five years from offensive otorrhœa. Tympanum was absent on both sides. The ossicles were present on both sides; on the left they were incompletely ankylosed. The auditory passage and middle ear were cleansed and iodoform and spirits vini recti employed; in two days the stench disappeared. For eleven days five-tenths per cent. solution sulphate zinc was used, then the iodoform again. In a month the vegetations in the tympanic cavity had disappeared; and patient was discharged with his hearing much improved.

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NOTICE.

Subscribers so desiring can have the fourteen numbers of the present volume tastefully bound, at a cost of one dollar, by sending same to the office of Bigelow Brothers, Printers, 64 Pearl street. This does not include delivery charges either way.

IN MEMORIAM.

PROF. JULIUS F. MINER.

On November 5, after years of suffering and disability, Dr. Julius F. Miner passed to his last rest. Probably not one who knew him was ignorant of his long illness, nor of the manner in which it was brought about. For five years he had been condemned to almost a living death, and he long had waited patiently and heroically for the only possible relief from his ailment. And the end came at last as he had hoped it would, quickly and without a struggle. He passed a restless evening, became quieter and slept well the latter portion of the night, was turned over in his bed in the morning and suddenly ceased to breathe.

Naturally the closing of such an eventful life was quickly known throughout the city, and called forth such active grief and sympathy as is aroused by but few such sad events. On the evening following, a hastily summoned but fully attended meeting of the Erie County Medical Society was held, during which an amount of well-deserved eulogy was spoken which the lives of but few men can elicit. His old friend, Prof. Rochester, read a touching memorial, which was directed to be spread upon the minutes of the Society, and which will be found on another page.

He was born in Peru, Berkshire County, Mass., February 16, 1823. He was educated at the Mountain Seminary in Worthington, Mass., the Williston Seminary in Easthampton, Mass., the Berkshire Medical College in Pittsfield, Mass., and the Albany Medical College. From the latter institution he graduated in January, 1847. In that year he began the practice of his profession in New Braintree, Worcester County, Mass., where he pursued it for five years, and afterward for three years in Winchester, N. H. In 1855 he established himself permanently in Buffalo, and thereafter resided here. He was editor of the *Buffalo Medical and Surgical Journal* from 1861 to 1879, and always occupied a high rank among the practitioners of his profession. He was a member of the Erie County Medical Society and at one time it spresident, and an honorary member of several other medical societies. In 1867 he was appointed Professor of Ophthalmology and Surgical Anatomy in the Buffalo Medical College, and in 1870 Professor of Special and Clinical Surgery. Since 1860, up to the time of his disability, he had occupied the position of surgeon to the General Hospital, and since 1870 that of surgeon to the Hospital of the Sisters of Charity.

Dr. Miner was married September 8, 1847, to Mary Cordelia, daughter of Richard Colt Cogswell, of Pittsfield, Mass., who survives him, together with two children, Worthington C. Miner and Mrs. Nathaniel W. Norton.

Such is a brief history of his life. His career as a surgeon attracted widespread attention. Throughout the land he was known as a peculiarly bold, original and successful operator. He was one of the first in this country to make thyroidectomy, an operation which was then considered one of extreme hazard. His method of enucleating tumors he applied with great success to large ovarian as well

as other neoplasms. Other conspicuous traits were so aptly described in the *Express* the day after his death that we reproduce this popular estimate of his character:

"To his professional brethren he was always agreeable, affable, and courteous, assisting by his counsel whenever opportunity offered. He was a warm and generous friend. To the young practitioner especially was he noted for acts of kindness, and many who have now attained eminence in the profession owe to him much of their success in the assistance which he was always ready to give. He was considerate and benevolent. Cool and dispassionate, he was at the same time fearless, and never hesitated to give his opinions on professional matters. One of his well-known traits was his jovial disposition. He was a man much given to pleasantry with his professional associates, and gave a cheerful and pleasant turn to discussions in the societies and to lectures. He was a man of excellent judgment, thoroughly honest, conscientious and upright."

By the old students of the college in which he loved to teach he was looked up to as a parent might be, and the relation between them and him was in many respects a filial one.

Not the least touching feature of his long sickness was the loving devotion with which he was watched by a devoted wife and family; none but a few of his intimate friends can realize the sleepless nights and anxious watches consecrated by them to his care. It falls to the lot of but few men to be so long the objects of such untiring and loving solicitude.

At a special meeting of the Faculty of the College his colleagues passed the following resolutions:

Resolved, That by the death of Dr. Julius F. Miner we mourn the loss of a colleague in whom was prominent every noble characteristic, whose counsel was ever wise, whose hand was always open, whose every impulse was just, whose skill and professional attainments were of the highest order, and who presented the noblest type of the surgeon and the true man.

Resolved, That we regard as most worthy of emulation his self-sacrificing devotion to duty, his untiring zeal in his profession, his generosity to the unfortunate, his constant efforts in behalf of the students of the college, and his unswerving fidelity to all trusts in him reposed.

Resolved, That in his long suffering and in the manner of his removal we see the martyr's fate, in that he contracted his death-wound during the charitable exercise of his skill and the generous effort to alleviate the sufferings of another, and we regard his death as a more glorious termination of a useful life than can ever be attained upon the battle-field in the effort to destroy others.

Resolved, That we herewith extend to his bereaved widow and family our profound and heartfelt sympathy, coupled with sentiments of admiration for the loving care with which they so long, by their gentle ministrations, kept alive the spark of life in one with whom we had so many common interests.

Resolved, That we give these our expressions of our loss to the medical and lay press, and that the College be closed during the day of the funeral.

Much more indeed might be said of Dr. Miner's life and character, but we firmly believe, in the words of the old epitaph—

"Praises on tombs are rifles vainly spent,
A man's good name is his best monument."

ATTACKS OF SLEEP.

Lethargic sleep is not very frequently met with, and authentic reports of cases of this nature are always of interest. In a recent thesis (*Thése d' agrégation*) Barth has gathered together many cases and facts bearing on this subject. A patient under care of Ward Cousins, aged forty-three, had been for twenty years subject to lethargic attacks which incapacitated him for work. The sleep came on, at evening, in an unnatural manner, and from it it was impossible to awaken him. He never dreamed, and was never troubled with incontinence. It continued two to five hours, when he awakened suddenly, to fall into a similar sleep in six or eight hours again. In the waking intervals his intelligence seemed as good as that of the average man of his class.

A young woman of twenty-seven years, observed carefully by Jones, had slept most of the time for ten years; her waking intervals being quite short. During sleep her visage was calm, but the arms, crossed over the chest, were in a condition of constant tremor from tetanic muscular spasms. Anæsthesia and unconsciousness while asleep were absolute.

In the case of a patient reported by Berdinel and Monod, the beginning of the crisis was marked by various hysterical manifestations, anorexia, nausea, ischuria, tympanitis, paraplegia, etc. The lethargy was frequently cut short by attacks of muscular rigidity, or by a crisis of clonic convulsions. Alimentation, which at the commencement of the sleep was impossible, could usually be carried out after a few days; semi-liquid foods were then swallowed mechanically.

Barth also describes an unreported case of Millard's; a woman, about thirty, whose lethargy seemed to come on as the result of violent mental and moral emotion. Abandoned by a lover by whom

she had become pregnant, she had been arrested as a vagabond. Carried to the hospital Beaujon in May, 1882, she was then in a condition of complete lethargy, without muscular rigidity, with anæsthesia of the skin and mucous surfaces, lids closed but not contracted, pupils sensitive to light. Efforts to arouse were unavailing, urine and fæces were retained; artificial feeding was resorted to. This attack lasted sixty-four hours, interrupted only by brief periods of partial awakening, in which she ate ravenously, but did not answer questions except by a grunt. She was four months along in her pregnancy and two months later aborted without any particular change in her condition. Finally cold douches twice a day, recommended by Prof. Charcot, seemed to have effect, and she slowly awakened to a normal state, her convalescence being interrupted by a typhoid fever, and seemed restored to health two months later.

THE MEDICAL DEPARTMENT OF THE STATE NATIONAL GUARD.

New York State has a National Guard of which she need not be ashamed, even if she has no conspicuous reason to be proud of it. Its various organizations are perhaps as well drilled and equipped as can be expected of troops that never see service. But there comes a most important question with which those in authority have never vexed themselves to any inordinate extent, namely, "What would become of the sick and injured in case our troops were called into actual service?" Doubtless an answer is ready upon the lips of some: that they would receive proper attention, though it would be excessively difficult to state where or how.

It is a matter that can not be made too public, that while each regiment is provided with a surgeon and assistant surgeon, and while each separate company is supposed to have a medical officer —though but few have one in reality—there is absolutely nothing in the way of a properly-drilled or equipped medical service; neither is any provision made for such drill, instruction, or equipment. If, for instance, one of our regiments were called into service out of town, and men were injured, they would have to extemporize every stretcher that was used, while the nearest wagon would have to be appropriated as an ambulance. Moreover, the stretcher bearers would be dependent only upon their own humane instincts for

knowledge as to how to lift and carry the wounded, for no instruction is given concerning this.

Ever since the writer has been connected with the State Guard he has found his brigade commanders cordially in unison with himself in the feeling that some provision should be made both in the way of appliances and instructions in their use; nevertheless, they have always been hampered by the fact that no such humane provision was contemplated at the politico-military headquarters in Albany, and that requisitions for such appliances were useless.

Unfortunately, too, the indifference as to the care of the injured soldier is widespread beyond the limits of the State. We know of nothing adequate in this line in any State organization, nor even in the regular service. To be sure, a circular emanating from the Surgeon-General's office deals with the matter of transport of the wounded, the best style of ambulance, etc., but none of these commendable vehicles are ordered for actual use of the present regular troops. The writer recently inquired of a regular officer as to what regulations were in force concerning detail of men for stretcher and ambulance service, and was surprised to find that there were none. How, then, was provision made for such duty? he asked, and learned that it was a matter left entirely to the discretion of individuals. This may not be so bad among men splendidly disciplined, few of whom are at any one time under fire for their first time, and with the traditions of the army war times to guide them; but it would be far different with our untried State troops in actual service, even in a domestic riot. Medical officers who never join their commands except on dress-parade have no incentive, under the present regime, to thoroughly familiarize themselves with the routine of such possible duties. We do not know that they have any authority, except when specially delegated, to order details of men to learn how to carry a stretcher, or lift a wounded man into an ambulance. It is all wrong; and it should be righted by a special general order from Albany.

Another matter of equal importance: The powers that be attach an ever-increasing importance to marksmanship; to the faculty of killing or disabling the enemy. But in the matter of self-preservation they have no enthusiasm beyond their own persons. By a

wise regulation, every soldier in many of the continental armies is provided with a little packet, containing in exceedingly small compass a triangular bandage, a quantity of iodoform cotton and a piece of parchment paper, or its equivalent. On the bandage are printed numerous figures, showing how it may be utilized for all parts of the body, and how by means of a bayonet or a musket a rude splint may be extemporized. Every man is instructed to hermetically seal his own or his comrade's wound by means of the contents of the packet. The consequence has been not only a great saving of life, but a great saving of the crippling or disabling wounds which so largely swell the pension list.

What a grand thing it would be if each of our soldiers—State and National—were thus provided and instructed. And, to bring it a little nearer home, what a blessing if every policeman in our city were similarly provided. Probably every patrolman in the course of a year comes upon at least one unfortunate, shot, stabbed, or otherwise injured, whose wound he might thus rudely protect till better help came. Indeed, we vividly recall more than one instance where human life might have been thus saved. To our certain knowledge, this benevolent and humane plan has been more than once suggested to our civil authorities in this and other cities, but without effect. There being nothing about such a plan as this to attract votes, it has lost its *argumentum ad hominem*, and has been allowed to drop without making any noise. Possibly some concerted action on the part of some body of medical men might have some effect. It is well worth trying. Who will inaugurate the enterprise?

Meeting of the Committees of Conference of the Various Special Associations Requested to Participate in a Conjoint Session.

In response to the notice issued by the Secretary of the Committee of Conference of the American Surgical Association, the Committees of Conference met at the Army Medical Museum, Washington, D. C., at 12 o'clock noon, on Friday, September 24, 1886.

The meeting was organized by the election of Dr. S. C. Busey, of Washington, Chairman, and Dr. J. Ewing Mears, of Philadelphia, Secretary.

Dr. Wm. Pepper offered the following resolutions, which, after careful consideration and discussion by those present, were adopted separately, and then as a whole:

Resolved, 1. That it is desirable that the following Societies—

The American Surgical Association,

The American Ophthalmological Association,

The American Otological Association,

The American Neurological Association,

The American Laryngological Association,

The American Gynæcological Association,

The American Dermatological Association,

The American Climatological Association, and

The Association of American Physicians and Pathologists, shall arrange for a conjoint meeting in the city of Washington, in the month of September, 1888, and subsequently at intervals of three years, at the same time and place.

2. That this arrangement shall not interfere in any way with the autonomy of each special Society; and that each Society shall retain the right to withdraw at any time from this conjoint scheme.

3. That the special feature of the meeting shall be the conjoint assemblage of the special Societies on two evenings during the session; on one of which there shall be an address delivered by the President of the conjoint meeting, and on the other there shall be communications by a referee and a co-referee on some subject of general professional interest.

4. That each special Society approving this report is invited to appoint one representative (with an alternate), and that the representatives so appointed shall constitute an Executive Committee to serve for one year, with power to elect such officers for the first conjoint meeting as may be deemed necessary; to prepare a programme for said meeting; to make all other necessary arrangements, and to prepare and submit a plan of organization for future meetings.

5. That all expenses connected with the conjoint sessions shall be apportioned equally by the Executive Committee among the special Societies participating.

* * *

We are in receipt of a monograph of 130 pages on *The Surgery of the Pancreas*, by Prof. N. Senn, of Milwaukee, which, though by itself not a large volume, is yet an encyclopædia of information about that viscus. Dr. Senn is probably the most indefatigable worker in the American profession today, and this brochure when presented to the American Surgical Association—from whose Transactions it is reprinted—drew out the highest encomiums from its most distinguished members. Indeed, its author scarcely has a

compeer in Europe, his age considered, either in respect to pathological knowledge or surgical skill. The paper in question is a digest of all that has been written concerning that of which it treats. As the doctor is possessed of the finest private medical library in this country, comprising some twenty odd thousand volumes, it will be seen that he is under no necessity of making frequent trips to the east in order to consult its literary stores.

* * *

It has been announced by the Austrian Minister of Education that the rooms devoted to their purposes are over-filled by the medical students who crowd into Vienna, and that the interests of all concerned thereby suffer. Accordingly, he has submitted to the Faculty of Medicine the question whether it will not be well to establish a certain numerical limit, beyond which they will not accept students, especially those who do not take their full course there. The Faculty are also asked to consider the matter of establishing something in the nature of an order of preference or privilege for those who announce their desire to study there.

It is an open question whether anything of this kind can be undertaken without seriously injuring the university. At all events it means, virtually, that if such a measure be carried out foreigners will be excluded from the benefits which have thus far been so freely offered them. In the interest of American students we hope the scheme may fail.

* * *

The Pneumatic Cabinet, so much discussed in the Journals for the last year or more, offers so much to the physician dealing with pulmonary disease, that we would be inclined to welcome any rivalry among manufacturers which would cheapen the instrument. A new dealer springs up, but he is immediately placed under a suit for infringement of patents by the company who introduced the apparatus, and who declare that they will bring similar proceedings against any one using the infringing cabinet. The profession owe much to the originators of the pneumatic treatment, but this alone would not constrain a physician to use their instrument. The real question is whether he can prudently purchase from others.

THE following rather significant language is used by a homœopathic writer of some note in a recent essay:

"But what are we doing in the meantime? While the regular physician is really beginning to study drugs and to administer but one remedy at a time, we are actually taking up the ground that he has found undesirable. Their mortality record is improving, while ours shows the opposite. Is it not possible that in the future we will occupy their present field? What with the introduction of the hypodermic syringe, the morphine powder to relieve pain, the quinine powder for all malarial diseases, the compound cathartic pill for constipation and the resort to surgery for curable affections, we are fast demonstrating our capacity to absord what the more enlightened allopath has discarded as useless. The name Homœopathy bothers some of us excessively and we wish to drop it from the title of our journals, societies and colleges. What will be the end of it all?

Is it not a fact that the study of Hahnemann's works and a return to his methods of treating the sick will be attended by the continued prosperity of the school, as well as a decrease in the number of fatal cases, while a continuance in our present course will result in the complete overthrow of our school, as such? Think it over."

* * *

AN OCCASION of no small interest was that of Nov. 17, when Prof. Julius Pohlman was tendered a reception and banquet at The Genesee by his students and medical friends. In spite of the severe storm, which kept away many, about one hundred sat down to the table. Dr. Vandenburgh presided as toast-master, and in becoming words welcomed the guest of the evening, who, leaving his Fatherland twenty years ago as a humble sailor lad, had lately been returned to his old home—delegated by the American Association for the Advancement of Science as its representative to the German Congress of Naturalists and Physicians. Such great honor had been never tendered under like circumstances, and deserved such recognition.

Beside a feeling response from Dr. Pohlman, numerous toasts were answered and numerous glees sung, and the company did not disperse till long after midnight.

ANCIENT IRISH MEDICAL JURISPRUDENCE.—The Brehon Code of Laws, the most ancient in Europe, dating from the fifth century, deals largely with medical affairs. They refer to surgeons who lived before the second century. They carefully provide for distress—that is taxation—for the support of the son taken from his mother's dead breast, for the incurable, for the care of the sick as to food,

bedding, nursing, and a house with the wind blowing in all quarters and with a stream close by. The medical man had power to keep from the house "fools and female scolds." The mode of distraint in case of a physician was, "Let his horsewhip and his probes be taken up. If he has not the proper number of such things, let a thread be tied about the finger next his little finger." The unqualified physician was to be fined if he operated without giving a guarantee against damages, or without having given notice that he was not qualified. The practitioner was to be quite exempt. An impartial physician was to be the judge of the mode of treatment and of the due recompense. The fees, always paid with oxen, the current coin, were most exactly proportioned to the rank of the patient. Cattle abounded, and as late as 1369 the value of a cow was only 3s. 4d.—*Dr. Mapother, in The Dublin Journal of Medical Science.*

Correspondence.

LETTER FROM BERLIN.

BERLIN, October 15, 1886.

My Dear Doctor: Let me contribute a few more hasty notes on matters which have come up at the recent Association of German Naturalists and Physicians; items which may interest some of your readers.

A comparative study of the action of digitalis during life and the results of succeeding *post-mortem* examinations reveal the fact that in the majority of cases where the drug did not act, there existed a fatty degeneration of the heart's muscle. Clinical experience teaches that digitalis is of most benefit in cases of weak muscles of the heart and irregularities of the valves, but less so in nephritis, and is of very uncertain action in weak hearts caused by acute diseases. For diagnostic purposes, the action or non-action of digitalis is very unreliable. Idiosyncracies in relation to this drug are of the greatest variety, thus a patient was able to take eight grammes in two weeks without any therapeutical or toxical effect. The powder given in wafers produces less toxic effects than the medicine given in any other form. Observations made in one of the public hospitals of

Berlin, the patients of which consisted, in the majority, of tramps and drunkards, demonstrated that in over fifty per cent. of all cases treated here with digitalis the drug remained powerless.

A comparative study of four different forms of pessaries was made by Dr. Kuestner; they were Hodge's and Thomas' pessaries, Mayer's ring and Schultze's figure eight. These four forms were tried in succession on the same persons in fifty different cases of retroflexion in private practice. Improvements were apparent under treatment with Mayer's ring in fourteen per cent. of the cases; Hodge's pessarie, in eighteen per cent.; Schultze's figure eight, in eighty-six per cent. and Thomas' pessary in ninety-two per cent.

Dr. Hack Tuke, of London, claimed that the often-quoted increase of insanity in England was based upon false premises. True, for every 100 lunatics in 1859, there are now, all other things being equal, 158, but such figures do not take into account the high rate of mortality in former years and the low rate at present. The only correct system would be to obtain the numbers of the annual additions to the insane asylums in proportion to the increased population. These statistics have been kept since 1878, and from them we learn that out of 10,000 inhabitants in England 3^{337} were admitted in that year for the first time to insane asylums; this per centage has never increased to four, and was in 1885 only 3^{101} per 10,000. The statistics of these eight years certainly demonstrate that the percentage of people who become insane in England is *not* on the increase.

The toxic qualities of the cholera bacillus have been investigated by Prof. Cantani of Naples. He claims that the poison may be due to ptomaïnes, to the secretions of the bacilli or to the bacilli themselves. Experiments made on dogs lead him to incline toward the last theory. Pure cholera cultures in beef tea, sterilized by heating to 100° C. injected into the dog's peritoneum, produced all the symptoms of cholera poisoning, while pure beef tea, injected in the same manner, left the animals in perfect health. This certainly would demonstrate toxic qualities for the dead bacilli when absorbed by the living body.

Treatment of whooping-cough formed the subject of Dr. Michael. He gave a description of 250 cases treated with pulv.

resinae benzoes, or with quinine, blown into the nasal cavity. Among 100 carefully observed cases five remained totally free from any attack after one treatment; in three a few attacks returned within two or three days. A decided improvement was recorded in sixty-six cases, while twelve remained unchanged and in fourteen the disease increased. After two or three days seven were cured; in less than twenty days twenty-three. The average time of treatment in fifty cases was fourteen days. The result of these observations strongly speaks for the theory that whooping-cough is a specific reflex neurosis of the nose which can be shortened or cured by medicinal powders blown into the nasal cavity.

The advances of modern surgery were strikingly illustrated by Prof. Bergman when he said that less than fifty years ago Sir Astley Cooper, lecturing to his students upon the most vulnerable parts of the body, said about operations upon the skull: "This brings you to the most delicate and vulnerable organ. When the bone is removed your hand dare not tremble nor your knife slip one hair's breadth, for only a thin membrane remains between the life of your patient and eternity; a small cut through this membrane means certain death." And today we cut deeply into the brain and cure our patient.

Grawitz exhibited anatomical specimens preserved in a cheap fluid which preserved all the size and shape as well as all the natural colors of the objects, with the exception of blood-red, which turned reddish brown. The composition of the fluid is as follows: 150 grm. common salt; 40 grm. sugar; 20 grm. saltpetre; 1 liter water; slightly acidified by the addition of a little tartaric acid. After the specimens have been placed in this fluid, water is added until the preparation sinks to the bottom of the vessel. Here it remains from four to eight weeks, according to the size of the specimen; after that it is placed in a fresh fluid of the same composition, for exhibition purposes. One liter of this fluid costs about one-sixth as much as one liter of alcohol.

The meeting of the German Association of Naturalists and Physicians will meet next year at Wiesbaden, under the presidency of Prof. Fresenius, with Dr. A. Pagenstecher as secretary. The activity of this year's meeting was not very striking; neither from a

scientific nor from a medical standpoint, as is to be expected from a body of men whose principal aim is social intercourse. Out of the thirty sections only nine are devoted to natural and physical sciences, one to jurisprudence, one to agricultural experiments, one to the introduction of natural sciences into schools, and eighteen to different departments of medicine. These eighteen sections registered a membership of 2,281, and only three hundred and three papers were read; the most lively section was that of gynæcology, whose seventy-six members held ten meetings and read thirty papers, whereas the section of "internal medicine," with four hundred members, met only four times, and had eighteen papers on their programme. The German Association evidently believes in the phylosophy of "rest and recreation," for the social programmes of the week were large and varied for the meeting as a whole, as well as for single sections or classes; and as these programmes were rigidly followed with strict Prussian military discipline, the time was well occupied from morning till night, even without any learned debate on abstract points in science or medicine.

Cordially yours,

JULIUS POHLMAN.

Society Proceedings.

UTICA MEDICAL LIBRARY ASSOCIATION.

Reported by J. G. Kilbourn, M. D., Sec'y.

The regular annual meeting of this Association was held in Library Hall, October 7, 1886.

Dr. Hunt, president, in the chair.

Dr. Theodore Deecke then read a paper, "On the Speedy Detection of Poisons" (published on another page), after which the Association adjourned.

The November meeting of this Association was held at the residence of Dr. W. E. Ford, on the first instant.

Dr. Gibson reported five cases of non-venereal syphilitic infection.

Dr. W. B. Palmer reported a case of laceration of the perineum in a little girl three years of age, caused by falling on a lath.

Dr. Charles G. Wagner, of the State Lunatic Asylum, brought before the Society a patient who had been operated upon for an extensive papillomatous tumor involving the integument of the neck and scalp. The patient was a woman twenty-nine years of age. At birth a small raspberry-like elevation appeared just behind the left ear. It was about the size of a penny, and slightly elevated above the skin. For a number of years it caused no trouble, but slowly increased in size and thickness. About seven years ago it had attained the size of a silver half dollar, and its elevation was then about half an inch. A prolongation from it half an inch in width extended upward and backward on the hairy scalp a distance of about three inches. The growth was at this time of a bluish wine color, unsightly and tender under pressure. The patient consulted a number of surgeons, and was treated for several months by means of caustics, but without benefit. Nothing further was done for her relief until she presented herself to Dr. Wagner about two months ago. The growth had then extended further down the neck, was of an irregular, triangular shape, and presented the cauliflower appearance of a papilloma. It was very vascular, tender under pressure, bleeding on slight irritation, and had become so large that she could no longer cover it up with her hair. In view of the fact that the growth was constantly increasing in size, and also the proneness of these papillomatous excrescences to undergo epitheliomatous degeneration if left undisturbed, it appeared desirable to remove it at once. Accordingly, on September 13, 1886, the patient was etherized, the parts were thoroughly cleansed with the bi-chloride solution (1–1500), and the growth, together with the underlying skin, entirely exsected. There was free hemorrhage, which, however, was easily controlled by torsion and ligature. That part of the wound which was occasioned by the removal of the prolongation on the hairy scalp was closed without difficulty by drawing the edges together and maintaining apposition by means of two silver sutures, while close coaptation was secured by means of fine sutures of iron-dyed silk at intervals of a quarter of an inch. The principal wound was in the shape of a triangle, with its base one and one-half inches long,

immediately behind the ear, and the apex extending three inches downward and backward on the neck. This denuded surface was completely covered with integument without denuding a new surface, by means of a flap obtained in the following manner: An incision was carried from the lower end of the base line mentioned above, downward and backward, describing a parabolic curve. The integument between this incision and the original wound, triangular in shape, was next dissected free, and the apex of the flap thus obtained carried up to the angle at the upper end of the base line (where it was secured by means of a single silver suture), thereby entirely covering the denuded surface and leaving but a slight puckering of the skin in front of the curved incision. Close approximation along all the lines of incision was then secured by means of a large number of very fine silk sutures. There was but slight inflammation; union by first intention was secured, and the patient was up and able to attend to her usual duties at the end of a week.

After discussion of these cases the Society adjourned till December 5th.

ERIE COUNTY MEDICAL SOCIETY.

Special Meeting, November 6, 1886, with Reference to the Death of Dr. Miner.

A full meeting of the Society was obtained, in spite of a summons issued in extreme haste, and the tributes paid to the memory of the deceased were feeling and eloquent.

The President, Dr. Dorland, on taking the chair, reminded the members that they had assembled for the purpose of paying that tribute of respect which is due to the memory of a great man of our profession, who after weary months and years of confinement and suffering has finally passed away to his eternal home. "There are many here," he said, "who were better acquainted with the doctor, and who are therefore better qualified to speak appropriately of his virtues, his character and his worth. But I desire to say a few words in reference to one whom I respected so heartily. In the

course of my earlier years of practice I had occasion to avail myself of the good judgment and skill of Dr. Miner, and I always found him equal to any emergency. He was uncommonly clear-headed and practical. He despised sham and pretense, and had no patience with wholesale, indiscriminate drugging as practiced by some, though he had great faith in *vis medicatrix naturæ* when in his opinion rightly applied."

The memorial of the evening was read by Dr. Thomas F. Rochester, who, in presenting it, said: "I have had many conversations with Dr. Miner about just such occasions as this, and he always thought that everything ought to be as brief as possible. For that reason the paper I present to-night is very brief. It is not a eulogy or a history of his condition, but just a brief expression of my feeling on this occasion."

Julius F. Miner, M. D., passed quietly away as the day was breaking on the 5th of November, 1886, in his 64th year. To the speaker this sad and significant event is most touching and impressive. It is the ending of an intimate social and professional friendship of over thirty years, and of a connection as hospital and college colleague for nearly as long a period. This experience of more than a quarter of a century is filled with bright and pleasing remembrances, save only of the later period of sickness and suffering which he was called upon to endure; and even these could not quench or even obscure the enthusiasm and facetiousness with which he was most remarkably endowed. We are assembled here to honor his memory and to pay this tribute of respect to which he was so fully entitled as a warm-hearted, generous man, and as a most distinguished, prominent and benevolent physician and surgeon.

He came to this city in 1855, and so soon and so well did he establish himself that he was made surgeon to the Buffalo General Hospital in 1860, subsequently the scene of so many of his brilliant and successful operations, and where he evolved and put in practice his system of enucleation for the removal of ovarian and other tumors with which his name is associated the world over, and of which he received most flattering recognition at the International Medical Congress held in Philadelphia in 1876, where he expounded it, and where it attracted more attention and commendation than any other person on any other subject.

He succeeded Prof. Sanford B. Hunt in 1861 as editor and proprietor of the *Buffalo Medical and Surgical Journal*, first established by Prof. Austin Flint, and conducted it for many years, until compelled by impaired health to transfer it to other hands. In 1867 he was elected to the chair of Anatomy in the Medical Department of the University of Buffalo, and in 1870 to that of Special and Clinical Surgery, dividing the honors of the position with Prof. E. M. Moore of Rochester. In 1870 he was also made one of the surgeons to the Sisters of Charity Hospital.

Dr. Miner was an active and influential member of the City and County Medical Society, and of the American Medical Association, and always attracted much attention by the force and originality of his views and methods, which were, however, always practical and conservative.

He delivered his last course of lectures in the session of 1881–82; when, in the midst of his active and useful career he was stricken with paralysis, and since then has mostly been confined to his house, and, for the last three years, to his bed. For many years previous to this his locomotion had been considerably impaired, but with steady head and resolute will be continued to do an immense amount of labor, and probably had as large a surgical practice as any person could possibly perform. He possessed that property which is called personal magnetism, to a remarkable degree.

He had many office students, and the relation that existed between him and them as well as with the students at the Medical College, was fraternal and filial to a remarkable degree. "His boys," as he delighted to call them, were devotedly attached to him, and his professional sons in all sections of this broad land will mourn as for a father gone when they learn of his demise.

Gentlemen of the Erie County Medical Society: We have been called upon to part with a member and an associate who was an honor to us, and an honor and a great staff to the community in which he lived. Let his memory live in our hearts. Let us spread a record of our love and esteem upon our minutes; let us send to his bereaved family our most heartfelt sympathy and condolence, and let us attend his funeral in a body.

On motion of Dr. D. W. Harrington, the Secretary was directed to spread the memorial upon the records of the Society and furnish the daily press with copies of the same.

Dr. E. C. W. O'Brien said:

Mr. Chairman—Among all the members of our profession in this city, probably there are not many who had the honor of a more intimate acquaintance with Dr. Miner than myself. If not, strictly speaking, one of my early preceptors, he was my friend from early manhood, one to whom I have been, and am, most deeply indebted; who gave me invaluable advice, not only in regard to the duties which would devolve upon me in the path of life I had chosen, and counseled me on general affairs, even, I had almost said, as a father would counsel a son. Always accessible, never repellant, ever willing to give from his bountiful store of knowledge to those less favored than himself, he may truly be said to have been the young man's—particularly the young physician's—friend; by whom, in turn, he was truly loved and highly respected.

Dr. Miner fully deserved the brilliant professional reputation he had attained. A man of great natural ability, of deep study, and of wide experience, it is no wonder that he came to be looked upon as one of the bright and shining lights of the medical profession. Noble in character and presence, he always commanded

attention and admiration in whatever circle he appeared. His reputation as a surgeon had become national long before he was overtaken by his disabling illness, and his remarkable skill and wisdom were so well known that hardly a day passed before he was stricken down, without a call upon him by even the ablest members of our profession in this portion of the State, for aid and advice in cases likely to baffle human skill. His charity was large, his friendship was sincere and his heart was big and honest. He gave freely to the poor—never turning a deaf ear to the cry of distress, or refusing his professional aid to the stricken and needy. His sense of honor was as fine and keen as that of any man who ever won a medical diploma. This trait of Dr. Miner was so well known and thoroughly appreciated as to frequently call forth the remark: "Dr. Miner could not be dishonorable under any circumstances." Fortunate, indeed, will be the physician or surgeon who may in the future so nobly win and so richly deserve the admiration, confidence and affection of the local members of the medical fraternity as did Julius F. Miner.

Dr. Lucien Howe spoke of Dr. Miner as one of the oldest, most successful, and most eminent members of the profession in this city. He came here poor and unknown, and carved his own destiny and made himself what he was. His devotion to medicine as a whole was striking. He looked upon it as a sort of divine heritage. "He was a skeptic" might fitly find a place on his monument—a skeptic in the sense that he was a student and investigator, and had no respect for idle theories. He believed what he saw and what he knew. Regarding him from the standpoint of a surgeon, he could be spoken of as one of the oldest, as he was one of the most successful and prominent in the profession. His identity with the two large hospitals and the medical college of this city, if nothing else, would be sufficient to make him eminent. These institutions, which he either helped to found or so greatly strengthened with his zeal and untiring energy that they remain, to-day are the lengthened shadow of the man who is gone. His strength of character and untiring energy were told of, and it was said that, to the honor of the man, in medicine he was venerated as an authority. With his dominating characteristics it might be said truthfully that he can appear before the bar above, standing there like an honest man, with no mask upon his face and no shackles on his conscience.

Dr. F. E. L. Brecht paid a tribute to his former preceptor's memory, alluding to his affection for his students and his pride in their success. His readiness to give counsel to the younger mem-

bers of the profession, his spotless integrity and his patience under his dreadful affliction, were all dwelt upon, his remarks concluding with an expression of heartfelt sympathy to the family.

Dr. Van Peyma read an affecting memorial, which paid tribute to the many kind qualities of the late Prof. Miner, as well as to his natural shrewdness and good judgment in his profession.

Other remarks to the same effect were made by Drs. Strong, Ring, Harrington, J. C. Greene, Phelps, Barnes and Bartlett.

Finally, after some feeling and timely remarks by Dr. Cronyn, the meeting adjourned.

Book Reviews.

OUTLINES OF THE PATHOLOGY AND TREATMENT OF SYPHILIS AND ALLIED VENEREAL DISEASES. By Herman Von Zeissl and Maximilian Von Zeissl. Translated by H. Raphael, M. D. Pp. 402. New York: D. Appleton & Co. 1886. Buffalo: Ulbrich & Kingsley.

Who has ever been in Vienna but remembers the renowned Von Zeissl, who of later years had to be almost carried from one ward to another on account of his locomotor ataxia, but whose mind, bright as ever, was enriched with the countless experiences that have made his writings so valuable. His large *Lehrbuch* appeared in its last edition in 1882.

In the present work we have a compendium based on the larger preceding treatise, compiled by father and son, which appears now for the first time in English dress.

Perhaps its most marked characteristic feature is the prominence given to pathology, concerning which none can speak with greater authority than its authors. That they are dualists is made peculiarly evident even by a casual examination; and that they have reason for their position they make quite plain. While we consider this as the only tenable position, we nevertheless like to see it distinctly enunciated and corroborated. Gonorrhœal arthritis is still termed a rheumatism by the authors, and the translator has of course followed them, nevertheless we dislike the use of the latter expression.

The descriptions of the lesions of syphilis are peculiarly happy,

and their pathological minutiae are well delineated so far as can be without elaborate illustrations. Each of the various organs is taken up in turn and the effects upon it of the syphilitic poison discussed with care. Interesting sections on endemic syphilis (the *Radesyge* of the Norwegians) and on malignant syphilis are inserted, while the important subjects of syphilophobia, mercuriophobia, syphilisation, and the nursing and care of syphilitic children are not neglected.

The views of Von Zeissl have been so often alluded to in other works that it is pleasant to find them in such shape that our students generally can have access to them. It is a most thorough and practical manual, and translator and publisher both have done well in their respective capacities in thus issuing it.

Diseases of the Nerves, Muscles and Skin. Vol. III. of Eichhorst's Handbook of Practical Medicine in Wood's Library. William Wood & Co. New York: 1886. Buffalo: J. H. Matteson.

This is the concluding volume of the three by the eminently practical and learned teacher of Zurich, and to our mind the most concise and valuable of the series. For its brief yet full presentation of diseases of the cord, particularly, we have nothing but praise. But few medical writers have the faculty of saying so much in so few words as the author of this work. For a terse presentation of that which it is most necessary to know we do not think this work has an equal in our language. Illustrations sufficiently elegant for their purpose lend admirable aid to the text, especially in this third volume. It will be strange if new editions of Eichhorst's work are not rapidly called for.

The Physiological, Pathological and Therapeutic Effects of Compressed Air. By Andrew H. Smith, M. D. Pp. 112. Detroit: George S. Davis. 1886.

This is not a pamphlet devoted to advertising the merits of some pneumatic cabinet, as its title might, perhaps, imply, but a careful, rational study of the effects of working in condensed atmospheres, as men have to in some employments. Its author was surgeon to the company which built the Brooklyn bridge, and had most extensive opportunities for studying the so-called "caison disease," by which both he and the profession at large have been the gainer. Upon

the physiological and pathological basis thus afforded he concludes with a chapter on the therapeutic effects of condensed air, in which the matter is studied on its merits, without reference to the apparatus of any one in particular, and in a manner which will repay perusal.

THE MEDICAL NEWS VISITING LIST. BLAKISTON, SON & CO.'S VISITING LIST.

We are in receipt of both of these Lists for 1887. Where both are so handy and convenient, and each so well published, we find little or nothing to criticise and much to commend. The former has an erasable tablet which is both new and neat; the latter is a trifle the smaller of the two.

BOOKS RECEIVED.

Transactions of Texas State Medical Society for 1886.

From D. Appleton & Co., through Ulbrich & Kingsley:

Pathology and Treatment of Syphilis: VON ZEISSL.

From Wm. Wood & Co., through J. H. Matteson:

Diseases of Nerves, Muscles and Skin: EICHHORST.

From P. Blakiston & Co., through Peter Paul & Bro.:

Visiting List for 1887.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

Hostess—"It seems so odd, sir, you are so young, and yet a doctor!"

Young Doctor—"Yes, madame, it does; but you must know I only attend very small children as yet."—*Exchange.*

QUEER TREATMENT.—An advertisement extolling the virtues of a new make of infant feeding-bottle, winds up with: "When the baby has done drinking it must be unscrewed, and laid in a cool place, say under the tap." Poor baby!—*N. W. Lancet.*

The Treatment of Erysipelas with Creasote.—Dr. H. J. Fox, writing in the *St. Louis Medical Journal*, May, 1886, claims that creasote may be regarded almost as a specific in the treatment of erysipelas. His manner of application is to keep the parts constantly covered with cloths wet with a solution of 6 to 20 drops to the ounce of water. In ulcers or wounds it may be used in the form of a poultice by stirring ground elm into the solution. The strength to be regulated according to the virulence of the attack. Ordinarily, 10 drops to the ounce is strong enough for the cutaneous form of the disease, and in dressings for wounds or recent injuries. If the inflammation threatens to spread rapidly, it should be increased to 20 or more drops to the ounce of water.

The antiseptic properties of this remedy render it of additional value, as it will certainly destroy the tendancy to unhealthy suppuration, and thus prevent septicæmia.

In the treatment of hundreds of cases of erysipelas, according to Dr. Fox, but a single fatal case has occurred, and that one in an old and depraved system. In the less violent attacks no other remedy was used, but where constitutional treatment was indicated, the usual appropriate tonics were prescribed.—*Therapeutic Gazette.*

Paraldehyde as an Antidote to Strychnine.—The property of paraldehyde of greatly reducing the activity of the spinal cord as a reflex center, led Prof. Bokai (*Pharmaceutical Post*, April 14, 1886) to test paraldehyde as an antidote to strychnine poisoning. The results of his experiments made on rabbits, cats and dogs, were almost invariably favorable. The animals first received a non-fatal dose of paraldehyde, and then an absolutely lethal dose of strychnine was given. In no case did the strychnine produce death. If, however, doses of paraldehyde, which are themselves fatal, were given to animals, the largest doses of strychnine were not able to remove the poisonous symptoms of the paraldehyde or to delay the fatal processes. It would appear, therefore, that the antagonism between these two drugs is only one-sided. Since the hypnotic action of paraldehyde is much more rapidly produced than the poisonous symptoms of strychnine, the hope is not unreasonable that paraldehyde, if given soon after ingestion of a poisonous dose of strychnine, might serve to antagonize it. Prof. Bokai, strange as it may seem, does not appear to have made any experiments in this connection. Should paraldehyde be proved to be an antagonist of strychnine, its use for this purpose is almost without risk, since it is free from the unfavorable action on the heart possessed by chloroform and chloral, which also have some antagonistic power on strychnine.—*Therapeutic Gazette.*

A Heterodymic Monster.—Drs. Montare and A. W. Reyes having been commissioned by the Havana Academy of Medicine to examine a double monster, have communicated their report to a Cuban medical journal, accompanying it with a rough sketch of the subject. Following the French classification of such monsters as consist of one perfect individual with an imperfect and much smaller accessory individual attached to the anterior surface of the trunk by means of a pedicle, Dr. Montare refers the present case to the group of heterodymia, the "parasite" having a head and thorax but no pelvis, the other two groups being heteropagia, where both head and pelvis exist, and heteradelphia, where there is no head. The perfect child was a girl, and appeared to be in good health and well developed; she was seven months old at the time of the examination. The pedicle was soft and flat, and attached in the median line between the xiphoid cartilage and the umbilicus. The accessory individual was of an irregular ovoid shape; the smaller end, representing the head, being upward. It was more than a foot in length, and measured nine inches round the head and seven and three-fourths inches round the narrowest part, or neck. The cranial bones could be distinctly felt, also a lozenge-shaped fontanelle. There were a circlet of hairs round the top of the head, two rudimentary eyebrows, a soft imperforate nose, and a minute perforation, encircled with hair, representing the left eye. The right eye, however, was represented by one end of a mucus groove, which ran downward to another transverse groove representing the mouth, the right third of which was perforated. In this part was a small mucus excrescence representing the tongue, and a triangular tooth, which latter had come through when the child was five months old. The elements of a vertebral column, and hard prominences representing the upper extremities, could be distinguished under the skin. When the parasite was manipulated the hairs became more erect and the skin resembled the cutis anserina; the "upper extremities" also became more prominent. This was likewise remarked when the child was taking the breast. The parasite could be pinched without attracting the child's attention, and it had occasionally had knocks and scratches without apparently awakening any consciousness of pain in the child, though after it had been much handled the mother

said that the child had seemed unquiet throughout the day. The mouth secreted some saliva, which dribbled from it. No vascular sound or movement could be detected.—*British Medical Journal.*

Simultaneous Extirpation of the Uterus and one Kidney.—One of the earliest successful nephrectomies was that made by Simon two days after removing the uterus for cancer, it being evident that the ureter had been wounded in the removal. In 1881 Bardenheuer, of Cologne, published an unsuccessful similar case. Lately, however, he has been able to score a success. While removing *per vaginam* a cancerous uterus he cut out a section of one ureter, the case being one of peculiar difficulty. Losing no time he at once made a lumbar nephrectomy on the side of the wounded conduit. The patient rapidly recovered from this double operative ordeal.

Abletsoff, according to the *Lancet*, has made a careful study of the effect of various drugs upon night-sweats. He finds that hydrochlorite of pilocarpine, even in doses of from one-sixth to one-eighth of a grain, not only fails to diminish the sweating in most cases, but renders the patient's condition worse, by reason of the gastro-intestinal irritation which it produces. Neither does this drug possess the superior expectorant properties which have been alleged for it. Duboisine, picrotoxin, and homatrophine certainly reduce the amount of respiration; but, as the use of the two former drugs may be followed by unpleasant effects, homatrophine is to be preferred in phthisical cases.—*Exchange.*

Dr. Wm. H. Daly thus concludes a valuable article on the simplest and best methods of treating diphtheria:

"But there are some rules which I beg you will follow faithfully. These are: (1) Give calomel in its purity; (2) give it in large doses; (3) give it frequently; (4) give it until you have the free and characteristic catharsis; (5) give light, nutritious diet; (6) give little or no other medicine.

"If these simple rules are followed and common sense is allowed to take the place of common prejudice, you will save more of your diphtheria patients by this than by any other method known to modern medicine."—*New York Medical Journal.*

1916.